



# STIC Search Report

## EIC 1700

STIC Database Tracking Number: 123901

**TO: Vickey Ronesi**  
**Location: REM 10D20**  
**Art Unit : 1714**  
**June 9, 2004**

**Case Serial Number: 10/072612**

**From: Kathleen Fuller**  
**Location: EIC 1700**  
**REMSSEN 4B28**  
**Phone: 571/272-2505**  
**Kathleen.Fuller@uspto.gov**

### Search Notes

I searched each of the 6 components as a component registry number of a polymer. There were only 3 polymers meeting that criterion and 3 Chemical Abstract references from the 3 polymers. However the 3 polymers contained other components in addition to the desired 6. I then searched for polymers containing 5 of the desired components and limited the polymers to those containing 5-6 components. There were 26 CA references. All of the CA references were printed with the polymers structures following the reference.

The application for hits case has been indexed by CA but the 6 component polymer is not assigned a registry number, just mentioned in the abstract, and thus is not structurally indexed. Only the MBS polymer is indexed and assigned a Registry number.

I checked the Cyro website and did not find specific information on the polymer .



# STIC Search Results Feedback Form

**EIC17000**

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader  
571/272-2505 REMSEN 4B28

## Voluntary Results Feedback Form

- I am an examiner in Workgroup:  Example: 1713  
➤ Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28



**Mellerson, Kendra**

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**From:** Unknown@Unknown.com  
**Sent:** Friday, June 04, 2004 4:53 PM  
**To:** STIC-EIC1700  
**Subject:** Generic form response

ResponseHeader=Commercial Database Search Request

AccessDB#= 123901

LogNumber= \_\_\_\_\_

Searcher= \_\_\_\_\_

SearcherPhone= \_\_\_\_\_

SearcherBranch= \_\_\_\_\_

MyDate=Fri Jun 4 16:53:25 EDT 2004

submitto=STIC-EIC1700@uspto.gov

Name=Vickey Ronesi

Empno=80299

Phone=571-272-2701

Artunit=1714

Office=Remsen 10D20

Serialnum=10/072612

PatClass=526/319,329.2,329.3,329.7,328.5,341,342,347.1

Earliest=02/06/2001

Format3=email

Searchtopic=The invention is a blend comprising an acrylic based multipolymer and a MBS copolymer rubber. The composition of the multipolymer is as follows (in weight %):

8-12% acrylonitrile  
3-8% butyl acrylate  
3-5% ethyl acrylate  
3-8% methyl acrylate  
65-80% methyl methacrylate  
15-30% styrene

This is a very specific polymer which has not been patented or even tried to be patented. However, I think it's commercially available as an acrylic multipolymer from Cyro Industries. The composition might be proprietary. Terpolymers of the above monomers are very common. Please supply only reference hits that have at least five of the monomers in a multipolymer. Thank you!

Comments=

=> FILE REG

FILE 'REGISTRY' ENTERED AT 13:48:52 ON 08 JUN 2004  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
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Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 7 JUN 2004 HIGHEST RN 690625-61-7  
DICTIONARY FILE UPDATES: 7 JUN 2004 HIGHEST RN 690625-61-7

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
information enter HELP PROP at an arrow prompt in the file or refer  
to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> FILE HCAPLUS

FILE 'HCAPLUS' ENTERED AT 13:48:58 ON 08 JUN 2004  
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FILE COVERS 1907 - 8 Jun 2004 VOL 140 ISS 24  
FILE LAST UPDATED: 7 Jun 2004 (20040607/ED)

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> D QUE L15

L4 66969 SEA FILE=REGISTRY ABB=ON 100-42-5/CRN  
L5 66209 SEA FILE=REGISTRY ABB=ON 80-62-6/CRN  
L7 17784 SEA FILE=REGISTRY ABB=ON 107-13-1/CRN  
L9 41563 SEA FILE=REGISTRY ABB=ON 141-32-2/CRN  
L11 18810 SEA FILE=REGISTRY ABB=ON 140-88-5/CRN  
L13 11755 SEA FILE=REGISTRY ABB=ON 96-33-3/CRN  
L14 3 SEA FILE=REGISTRY ABB=ON L4 AND L5 AND L7 AND L9 AND L11 AND  
L13  
L15 3 SEA FILE=HCAPLUS ABB=ON L14

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

*Component  
registry numbers  
for the 6 components  
of the polymer*

*only 3  
polymers in  
Registry  
with all 6 components,  
3 Chem. Ab. references  
from the 3 polymers*

=> D ALL HITSTR 1-3  
YOU HAVE REQUESTED DATA FROM FILE 'REGISTRY' - CONTINUE? (Y)/N:N

=> D ALL HITSTR 1-3 L15

L15 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1998:13887 HCAPLUS  
DN 128:76670  
ED Entered STN: 10 Jan 1998  
TI Forming multilayer metallic coating with excellent decorativeness and smoothness  
IN Kasari, Akira; Oda, Hiroaki; Endo, Mitsugu; Shimakawa, Mikio; Yokoyama, Tetsuya  
PA Kansai Paint Co., Ltd., Japan; Kasari, Akira; Oda, Hiroaki; Endo, Mitsugu; Shimakawa, Mikio; Yokoyama, Tetsuya  
SO PCT Int. Appl., 52 pp.  
CODEN: PIXXD2  
DT Patent  
LA Japanese  
IC ICM B05D001-36  
ICS B05D005-06; C25D013-00  
CC 42-10 (Coatings, Inks, and Related Products)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9747396	A1	19971218	WO 1997-JP1885	19970603
	W: GB, JP, KR, US				
	GB 2318312	A1	19980422	GB 1998-2670	19970603
	GB 2318312	B2	19991013		
	US 6165621	A	20001226	US 1998-239	19980206
PRAI	JP 1996-153518	A	19960614		
	JP 1996-227906	A	19960829		
	WO 1997-JP1885	W	19970603		

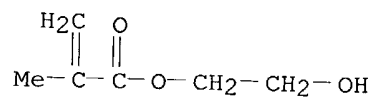
AB The title process is carried out by the three-coating system wherein (A) a first organic solvent-base, thermosetting metallic base coating composition having substrate-hiding properties, containing a neutralization product of a carboxylated resin having acid value 5-100, an amino resin, and a metallic pigment, and having, in the form of a 15  $\mu$ m-thick cured coating, a transmittance  $\leq 3$  for light having a wavelength 400-700 nm, (B) a second transparent aqueous thermosetting base coating composition having, in the form of a 15  $\mu$ m-thick cured coating, transmittance 10-95 for light having a wavelength 400-700 nm, and (C) an organic solvent-base thermosetting clear coating composition are successively applied onto a metallic object coated with a cationic electrocoating agent. A first coating was formed from Me methacrylate-Et acrylate-Bu acrylate-hydroxyethyl methacrylate-acrylic acid copolymer dimethylaminoethanol salt (I) 140, Cymel-370 34, Alpaste 891K 20, and iso-Pr alc. 129 parts; a second coating from I 50, neopentyl glycol-trimethylolpropane-phthalic anhydride-adipic acid-trimellitic anhydride copolymer dimethylaminoethanol salt 50, Me methacrylate-styrene-Bu acrylate-2-hydroxyethyl acrylate-1,6-hexanediol diacrylate-methacrylic acid-2-ethylhexyl acrylate copolymer dimethylaminoethanol salt 100, Cymel 34, Blue G316 5, and deionized water 220 parts; a clear third coating from 57 parts styrene-Bu

- acrylate-2-ethylhexyl acrylate-hydroxyethyl acrylate copolymer solution, 50 parts polymer obtained by polymerizing styrene, acrylonitrile, Me methacrylate, Me acrylate, Bu acrylate, 2-hydroxyethyl methacrylate, and acrylic acid in a U-Van 28-60 solution, 30 parts Cymel 303, 25% dodecylbenzensulfonic acid solution 4, and BYK-300 0.5 part.
- ST acrylic aminoplast multilayer metallic coating
- IT Polyesters, uses  
Polyesters, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-aminoplast-; forming multilayer metallic coating with excellent decorativeness and smoothness)
- IT Aminoplasts  
Aminoplasts  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-polyester-; forming multilayer metallic coating with excellent decorativeness and smoothness)
- IT Aminoplasts  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic; forming multilayer metallic coating with excellent decorativeness and smoothness)
- IT Coating materials  
(multilayer; forming multilayer metallic coating with excellent decorativeness and smoothness)
- IT 200625-97-4P, Butyl acrylate-ethyl acrylate-methyl methacrylate-hydroxyethyl methacrylate-acrylic acid-melamine-formaldehyde copolymer dimethylaminoethanol salt 200625-99-6P, Neopentyl glycol-trimethylolpropane-phthalic anhydride-adipic acid-trimellitic anhydride-melamine-formaldehyde copolymer dimethylaminoethanol salt 200626-01-3P, Styrene-1,6-hexanediol diacrylate-methacrylic acid-butyl acrylate-ethyl acrylate-methyl methacrylate-2-hydroxyethyl methacrylate-acrylic acid-Neopentyl glycol-trimethylolpropane-phthalic anhydride-adipic acid-trimellitic anhydride-melamine-formaldehyde copolymer dimethylaminoethanol salt **200626-02-4P**, Styrene-acrylonitrile-methyl methacrylate-methyl acrylate-butyl acrylate-2-hydroxyethyl methacrylate-acrylic acid-melamine-formaldehyde-ethyl acrylate copolymer  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(forming multilayer metallic coating with excellent decorativeness and smoothness)
- IT **200626-02-4P**, Styrene-acrylonitrile-methyl methacrylate-methyl acrylate-butyl acrylate-2-hydroxyethyl methacrylate-acrylic acid-melamine-formaldehyde-ethyl acrylate copolymer  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(forming multilayer metallic coating with excellent decorativeness and smoothness)
- RN 200626-02-4 HCAPLUS
- CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate, formaldehyde, methyl 2-methyl-2-propenoate, methyl 2-propenoate, 2-propenenitrile, 2-propenoic acid and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

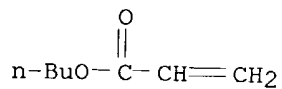
CRN 868-77-9  
CMF C6 H10 O3

*x extra component*



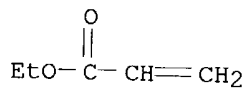
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CRN 141-32-2  
CMF C7 H12 O2



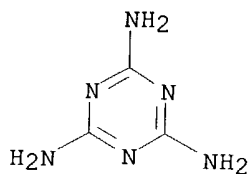
CM 3

CRN 140-88-5  
CMF C5 H8 O2



CM 4

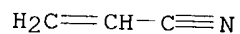
CRN 108-78-1  
CMF C3 H6 N6



*x extra*

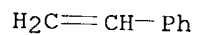
CM 5

CRN 107-13-1  
CMF C3 H3 N



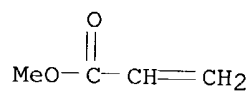
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CRN 100-42-5  
CMF C8 H8



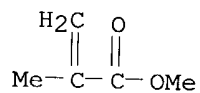
CM 7

CRN 96-33-3  
CMF C4 H6 O2



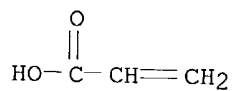
CM 8

CRN 80-62-6  
CMF C5 H8 O2



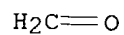
CM 9

CRN 79-10-7  
CMF C3 H4 O2



CM 10

CRN 50-00-0  
CMF C H2 O





AN 1997:537607 HCAPLUS  
 DN 127:150176  
 ED Entered STN: 23 Aug 1997  
 TI Aqueous dispersions for formaldehyde free print binders, manufacture thereof, and pigment printing mixtures containing the same  
 IN Shah, Pravinchandra Kantilal; Panchmatia, Pankaj Rugnath  
 PA The B.F. Goodrich Company, USA; Noveon IP Holdings Corp.  
 SO Eur. Pat. Appl., 13 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM D06P001-52  
 ICS D06P001-667  
 CC 40-6 (Textiles and Fibers)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 783051	A2	19970709	EP 1996-120977	19961228
	EP 783051	A3	19980819		
	EP 783051	B1	20040512		
	R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	US 5969018	A	19991019	US 1996-583261	19960105
PRAI	US 1996-583261	A	19960105		
AB	The title dispersions contain 0.1-15% $\geq 1$ phosphate ester and a copolymer (a) 0.1-15% dicarboxylic acid(s), (b) 0.1-10% $R_1R_2C:C(R_3)X(R_4)_nY$ ( $R_1, R_2, R_3 = H, Me; R_4 = C1-4$ alkyl; $n = 0, 1; X = H, \text{carboxyl, Ph, aryl, alkyl, alkaryl of } 1-30 \text{ C atoms; } Y = OH, NH_2; R_5 = H, C1-20 \text{ alkyl, aryl}$ ), and (c) $\geq 80\%$ backbone monomers. A copolymer prepared from itaconic acid 2, 2-hydroxyethyl acrylate 2, Et acrylate 95, and acrylamide 1% in the presence of Dextrol OC-15 phosphate emulsifier was used in pigment (Acramine Blue 3GNE) print pastes for printing 65:35 polyester/cotton blend sheeting fabric with good washfastness.				
ST	print binder formaldehyde free polymer				
IT	Binders Emulsifying agents Textile printing (aqueous dispersions for formaldehyde free print binders, manufacture thereof, and pigment printing mixts. containing the same)				
IT	Textiles (cotton, polyester blends; aqueous dispersions for formaldehyde free print binders, manufacture thereof, and pigment printing mixts. containing the same)				
IT	Polyester fibers, uses RL: TEM (Technical or engineered material use); USES (Uses) (fabrics, cotton blends; aqueous dispersions for formaldehyde free print binders, manufacture thereof, and pigment printing mixts. containing the same)				
IT	75268-82-5P, 2-Hydroxyethyl acrylate-itaconic acid-butyl acrylate-styrene copolymer 144907-84-6P, Itaconic acid-2-hydroxyethyl acrylate-ethyl acrylate-acrylamide copolymer 193073-71-1P, Itaconic acid-2-hydroxyethyl acrylate-ethyl acrylate copolymer 193073-76-6P, 2-Hydroxyethyl acrylate-ethyl acrylate-itaconic acid-butyl acrylate-styrene-acrylamide copolymer 193073-81-3P, 2-Hydroxyethyl acrylate-itaconic acid-butyl acrylate-styrene-acrylamide copolymer <b>193073-87-9P</b> , 2-Hydroxyethyl acrylate-itaconic acid-methyl acrylate-ethyl acrylate-butyl acrylate-2-ethylhexyl acrylate-acrylonitrile-styrene-methyl methacrylate				

copolymer

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(aqueous dispersions for formaldehyde free print binders, manufacture thereof,

and pigment printing mixts. containing the same)

IT 51811-79-1, Dextrol OC-15 51811-79-1, Dextrol OC 22

RL: NUU (Other use, unclassified); USES (Uses)

(emulsifier; aqueous dispersions for formaldehyde free print binders, manufacture thereof, and pigment printing mixts. containing the same)

IT 193073-87-9P, 2-Hydroxyethyl acrylate-itaconic acid-methyl acrylate-ethyl acrylate-butyl acrylate-2-ethylhexyl acrylate-acrylonitrile-styrene-methyl methacrylate copolymer

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(aqueous dispersions for formaldehyde free print binders, manufacture thereof,

and pigment printing mixts. containing the same)

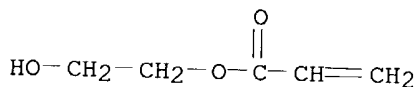
RN 193073-87-9 HCAPLUS

CN Butanedioic acid, methylene-, polymer with butyl 2-propenoate, ethenylbenzene, 2-ethylhexyl 2-propenoate, ethyl 2-propenoate, 2-hydroxyethyl 2-propenoate, methyl 2-methyl-2-propenoate, methyl 2-propenoate and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 818-61-1

CMF C5 H8 O3

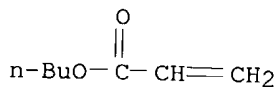


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CM 2

CRN 141-32-2

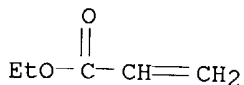
CMF C7 H12 O2



CM 3

CRN 140-88-5

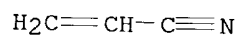
CMF C5 H8 O2



CM 4

CRN 107-13-1

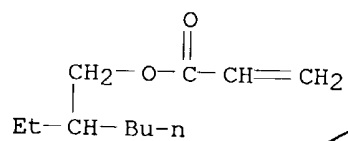
CMF C3 H3 N



CM 5

CRN 103-11-7

CMF C11 H20 O2

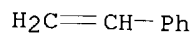


*extra*

CM 6

CRN 100-42-5

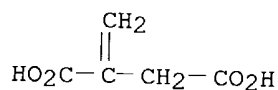
CMF C8 H8



CM 7

CRN 97-65-4

CMF C5 H6 O4

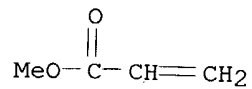


*extra*

CM 8

CRN 96-33-3

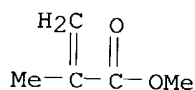
CMF C4 H6 O2



CM 9

CRN 80-62-6

CMF C5 H8 O2



L15 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1977:602526 HCAPLUS  
 DN 87:202526  
 ED Entered STN: 12 May 1984  
 TI Gas permeation-resistant transparent resins for packaging materials  
 IN Sakauchi, Takashi; Inoue, Takeshi; Amano, Hirotooshi; Sato, Katsuji  
 PA Kanegafuchi Chemical Industry Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF

DT Patent

LA Japanese

IC C08F279-02

CC 36-3 (Plastics Manufacture and Processing)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 52043897	A2	19770406	JP 1975-119911	19751003
	JP 59017727	B4	19840423		
PRAI	JP 1975-119911		19751003		

AB Gas permeation-resistant transparent resin compns. useful as packaging materials were prepared by polymerizing >200 parts monomer mixts. of 60-80% acrylonitrile and 20-40% unsatd. carboxylates in the presence of premixts. of 100 parts diene rubber derived from 50-100% of conjugated dienes and 0-50% acrylonitrile, unsatd. carboxylates, and (or) aromatic vinyl compds. and 20-200 parts monomer mixts. of 30-60% acrylonitrile and 40-70% unsatd. carboxylates and(or) aromatic vinyl compds. Thus, 10 parts of a rubber latex derived from water 200.0, butadiene 80.0, styrene 15.0, Bu acrylate 5.0, divinylbenzene 0.5, Na oleate 3.0, di-Na ethylenediaminetetraacetate (I) 0.001, FeSO4.7H2O 0.005, Na formaldehydesulfoxylate 0.1, p-menthane hydroperoxide 0.1, and tert-dodecyl mercaptan 0.25 part was heated 1 h at 60° with water 200.0, acrylonitrile 2.0, and Bu acrylate 3.0 parts, and heated 10 h at 60° with acrylonitrile 61.0, Me acrylate 24.0, lauryl mercaptan 2.0, I 0.005, HCl 0.1, K2S2O8 0.04, and a phosphate emulsifier 2.0 parts to give a powdered resin [59493-30-0], which was pelletized and injection molded at 220° to give a test piece with Izod impact strength 11.5 kg.cm/cm2, Vicat softening temperature 75° (ASTM D-1525-58T), flow (210°) 1.72 x 10-2 cm3/s, and O permeability 0.9 x 10-12 cm3-cm/cm2-s-10mm, compared with 11.2, 74, 0.80 x 10-2, and 0.8 x 10-12, resp. for a similar polymer prepared without premixing the rubber with monomers.

ST packaging material gas nonpermeability; diene rubber latex grafting; acrylin resin packaging material

IT Packaging materials  
 (for food, acrylic graft copolymer films as, oxygen

permeation-resistant and transparent)  
 IT Polymers, uses and miscellaneous  
 RL: USES (Uses)  
 (graft, packaging materials, for food)  
 IT Food  
 (packaging materials for, graft acrylic polymers as)  
 IT 59493-30-0 **63453-85-0** 63453-86-1  
 RL: USES (Uses)  
 (graft, packaging films, oxygen permeation-resistant and transparent)  
 IT **63453-85-0**  
 RL: USES (Uses)  
 (graft, packaging films, oxygen permeation-resistant and transparent)  
 RN 63453-85-0 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 1,3-butadiene,  
 butyl 2-propenoate, diethenylbenzene, ethenylbenzene, 2-ethylhexyl  
 2-propenoate, ethyl 2-propenoate, methyl 2-propenoate and 2-propenenitrile  
 (9CI) (CA INDEX NAME)

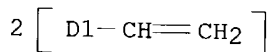
CM 1

CRN 1321-74-0

CMF C10 H10

CCI IDS

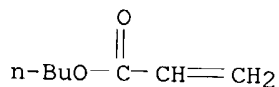
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CM 2

CRN 141-32-2

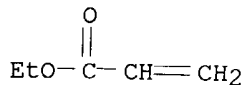
CMF C7 H12 O2



CM 3

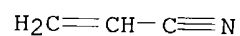
CRN 140-88-5

CMF C5 H8 O2



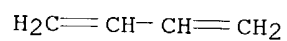
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CRN 107-13-1  
CMF C3 H3 N



CM 5

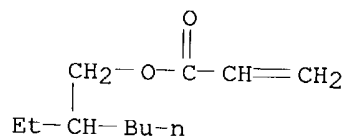
CRN 106-99-0  
CMF C4 H6



*extra*

CM 6

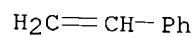
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CMF C11 H20 O2



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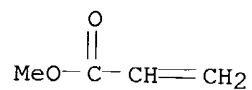
CM 7

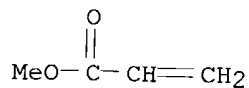
CRN 100-42-5  
CMF C8 H8



CM 8

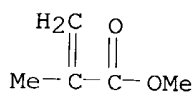
CRN 96-33-3  
CMF C4 H6 O2





CM 9

CRN 80-62-6  
CMF C5 H8 O2



=> D HIS

(FILE 'HOME' ENTERED AT 13:11:57 ON 08 JUN 2004)

FILE 'HCAPLUS' ENTERED AT 13:12:07 ON 08 JUN 2004  
E US20020167112/PN

L1 1 S E3  
SEL RN

FILE 'REGISTRY' ENTERED AT 13:13:32 ON 08 JUN 2004

L2 8 S E1-E8  
L3 2 S L2 AND PMS/CI  
L4 66969 S 100-42-5/CRN  
L5 66209 S 80-62-6/CRN  
E ACRYLONITRILE/CN  
L6 1 S E3  
L7 17784 S 107-13-1/CRN  
E BUTYL ACRYLATE/CN  
L8 1 S E3  
L9 41563 S 141-32-2/CRN  
E ETHYLE ACRYLATE/CN  
E ETHYL ACRYLATE/CN  
L10 1 S E3  
L11 18810 S 140-88-5/CRN  
E METHYL ACRYLATE/CN  
L12 1 S E3  
L13 11755 S 96-33-3/CRN  
L14 3 S L4 AND L5 AND L7 AND L9 AND L11 AND L13

FILE 'HCAPLUS' ENTERED AT 13:23:37 ON 08 JUN 2004  
L15 3 S L14

FILE 'REGISTRY' ENTERED AT 13:24:15 ON 08 JUN 2004  
L16 44 S L4 AND L5 AND L7 AND L9 AND L11  
L17 3 S L16 AND 5/NC  
L18 11 S L16 AND 6/NC

L19 35 S L4 AND L5 AND L7 AND L9 AND L13  
L20 0 S L19 AND 5/NC  
L21 1 S L19 AND 6/NC  
L22 6 S L5 AND L7 AND L9 AND L11 AND L13  
L23 0 S L22 AND 5-6/NC  
L24 6 S L4 AND L7 AND L9 AND L11 AND L13  
L25 1 S L24 AND 5-6/NC  
L26 0 S L4 AND L5 AND L9 AND L11 AND L12  
L27 0 S L4 AND L5 AND L7 AND L11 AND L12  
L28 36 S L4 AND L5 AND L9 AND L11 AND L13  
L29 5 S L28 AND 5-6/NC  
L30 7 S L4 AND L5 AND L7 AND L11 AND L13  
L31 2 S L30 AND 5-6/NC  
L32 23 S L17 OR L18 OR L20 OR L21 OR L23 OR L25 OR L29 OR L31  
SET COST OFF

FILE 'REGISTRY' ENTERED AT 13:48:52 ON 08 JUN 2004

FILE 'HCAPLUS' ENTERED AT 13:48:58 ON 08 JUN 2004

=> D QUE L32

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L5 66209 SEA FILE=REGISTRY ABB=ON 80-62-6/CRN  
L7 17784 SEA FILE=REGISTRY ABB=ON 107-13-1/CRN  
L9 41563 SEA FILE=REGISTRY ABB=ON 141-32-2/CRN  
L11 18810 SEA FILE=REGISTRY ABB=ON 140-88-5/CRN  
L13 11755 SEA FILE=REGISTRY ABB=ON 96-33-3/CRN  
L16 44 SEA FILE=REGISTRY ABB=ON L4 AND L5 AND L7 AND L9 AND L11  
L17 3 SEA FILE=REGISTRY ABB=ON L16 AND 5/NC  
L18 11 SEA FILE=REGISTRY ABB=ON L16 AND 6/NC  
L19 35 SEA FILE=REGISTRY ABB=ON L4 AND L5 AND L7 AND L9 AND L13  
L20 0 SEA FILE=REGISTRY ABB=ON L19 AND 5/NC  
L21 1 SEA FILE=REGISTRY ABB=ON L19 AND 6/NC  
L22 6 SEA FILE=REGISTRY ABB=ON L5 AND L7 AND L9 AND L11 AND L13  
L23 0 SEA FILE=REGISTRY ABB=ON L22 AND 5-6/NC  
L24 6 SEA FILE=REGISTRY ABB=ON L4 AND L7 AND L9 AND L11 AND L13  
L25 1 SEA FILE=REGISTRY ABB=ON L24 AND 5-6/NC  
L28 36 SEA FILE=REGISTRY ABB=ON L4 AND L5 AND L9 AND L11 AND L13  
L29 5 SEA FILE=REGISTRY ABB=ON L28 AND 5-6/NC  
L30 7 SEA FILE=REGISTRY ABB=ON L4 AND L5 AND L7 AND L11 AND L13  
L31 2 SEA FILE=REGISTRY ABB=ON L30 AND 5-6/NC  
L32 23 SEA FILE=REGISTRY ABB=ON L17 OR L18 OR L20 OR L21 OR L23 OR  
L25 OR L29 OR L31

*26 CA references with 5 of the polymers*

=> S L32

L33 26 L32

=> D L33 ALL 1-26 HITSTR

L33 ANSWER 1 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 2001:919296 HCAPLUS  
DN 136:56386  
ED Entered STN: 21 Dec 2001  
TI Cover sheet for solar cell  
IN Manabe, Kenji  
PA Sumitomo Chemical Co., Ltd., Japan



SO Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM H01L031-052  
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)  
 Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001352091	A2	20011221	JP 2000-120543	20000421
PRAI	JP 2000-104439	A	20000406		

AB The cover sheet is a mixture of a transparent resin and a fluorescent dye. The resin is preferably a Me methacrylate based resin, and the dye has a maximum absorption in wavelength range 370-600 nm and maximum emission in wavelength range 410-800 nm.

ST solar cell resin cover sheet fluorescent dye

IT Solar cells  
 (cover sheets containing transparent resin and fluorescent dyes for solar cells)

IT 9011-87-4, Methyl acrylate-methyl methacrylate copolymer 79869-59-3, Sumiplast yellow f17g 100443-95-6, Lumogen f yellow 083  
**205237-33-8**, Allyl methacrylate-butyl acrylate-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer  
 RL: DEV (Device component use); USES (Uses)  
 (cover sheets containing transparent resin and fluorescent dyes for solar cells)

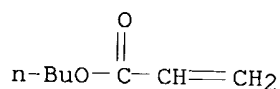
IT **205237-33-8**, Allyl methacrylate-butyl acrylate-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer  
 RL: DEV (Device component use); USES (Uses)  
 (cover sheets containing transparent resin and fluorescent dyes for solar cells)

RN 205237-33-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate, methyl 2-propenoate and 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

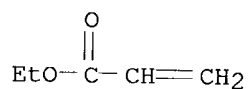
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CRN 141-32-2  
 CMF C7 H12 O2



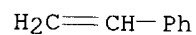
CM 2

CRN 140-88-5  
 CMF C5 H8 O2



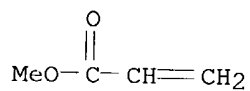
CM 3

CRN 100-42-5  
CMF C8 H8



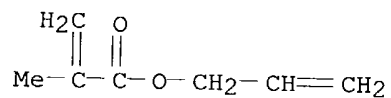
CM 4

CRN 96-33-3  
CMF C4 H6 O2



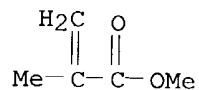
CM 5

CRN 96-05-9  
CMF C7 H10 O2



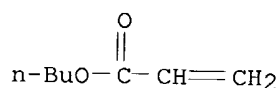
CM 6

CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 2 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 2001:497412 HCAPLUS  
DN 136:167746  
ED Entered STN: 11 Jul 2001  
TI Synthesis of acrylic resin for PU synthetic leather coloring agent

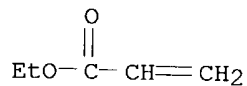
AU Wang, Xiaohang  
 CS Dandong Institute of Light Chemical Industry, Dandong, 118002, Peop. Rep. China  
 SO Pige Huagong (2001), 18(2), 18-19, 24  
 CODEN: PIHUFH; ISSN: 1004-8960  
 PB Dandong Qinghuagong Yanjiuyuan  
 DT Journal  
 LA Chinese  
 CC 35-4 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 38  
 AB The acrylic resin was synthesized from Me acrylate 5-10%, Et acrylate 5-10%, Bu acrylate 10-20%, Me methacrylate 20-30% and styrene 20-30% by solution polymerization with dibenzoyl peroxide (0.5-1.5%) as initiator in toluene (45-55%). The product had transparent appearance, good whiteness, and suitable viscosity, and can be used as medium or carrier in the manufacture of coloring agent for polyurethane (PU) synthetic leather.  
 ST acrylic resin coloring agent polyurethane synthetic leather  
 IT Polymerization  
 (solution; synthesis of acrylic resin for polyurethane synthetic leather coloring agent)  
 IT Coloring materials  
 Leather substitutes  
 (synthesis of acrylic resin for polyurethane synthetic leather coloring agent)  
 IT Polyurethanes, miscellaneous  
 RL: MSC (Miscellaneous)  
 (synthesis of acrylic resin for polyurethane synthetic leather coloring agent)  
 IT **396715-81-4P**, Butyl acrylate-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene copolymer  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (synthesis of acrylic resin for polyurethane synthetic leather coloring agent)  
 IT **396715-81-4P**, Butyl acrylate-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene copolymer  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (synthesis of acrylic resin for polyurethane synthetic leather coloring agent)  
 RN 396715-81-4 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate and methyl 2-propenoate (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 141-32-2  
 CMF C7 H12 O2



CM 2

CRN 140-88-5

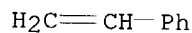
CMF C5 H8 O2



CM 3

CRN 100-42-5

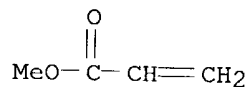
CMF C8 H8



CM 4

CRN 96-33-3

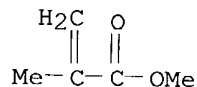
CMF C4 H6 O2



CM 5

CRN 80-62-6

CMF C5 H8 O2

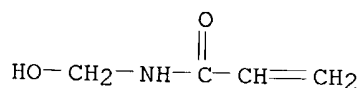


L33 ANSWER 3 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 2000:897354 HCAPLUS  
DN 134:327397  
ED Entered STN: 22 Dec 2000  
TI How to use styrene to modify acrylic adhesives  
AU Qiu, Li-gan  
CS Dep. Chem., Yancheng Teach. Coll., Jiangsu, 224002, Peop. Rep. China  
SO Huaxue Yu Nianhe (2000), (4), 171-172, 170  
CODEN: HYZHEN; ISSN: 1001-0017  
PB Huaxue Yu Nianhe Bianji Weiyuanhui

DT Journal  
 LA Chinese  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 40  
 AB This paper discusses how to use styrene to modify (meth)acrylate adhesives. With the proper formula chosen, the various elements affecting emulsion reactions were controlled and under the best technol. conditions. The cheap but good acrylic adhesives could be prepared for textile use.  
 ST styrene acrylate adhesive prepn textile; methacrylate styrene adhesive prepn textile  
 IT Polymerization  
 (emulsion; preparation and properties of styrene-modified acrylic adhesives)  
 IT Adhesives  
 (preparation and properties of styrene-modified acrylic adhesives)  
 IT Textiles  
 (preparation and properties of styrene-modified acrylic adhesives for textiles)  
 IT **336615-48-6P**, Acrylonitrile-butyl acrylate-ethyl acrylate-methyl methacrylate-N-methylolacrylamide-styrene copolymer  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (preparation and properties of styrene-modified acrylic adhesives)  
 IT **336615-48-6P**, Acrylonitrile-butyl acrylate-ethyl acrylate-methyl methacrylate-N-methylolacrylamide-styrene copolymer  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (preparation and properties of styrene-modified acrylic adhesives)  
 RN 336615-48-6 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate, N-(hydroxymethyl)-2-propenamide and 2-propenenitrile (9CI) (CA INDEX NAME)

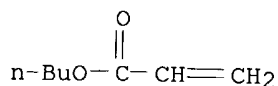
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CRN 924-42-5  
 CMF C4 H7 N O2



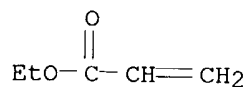
CM 2

CRN 141-32-2  
 CMF C7 H12 O2



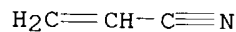
CM 3

CRN 140-88-5  
CMF C5 H8 O2



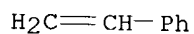
CM 4

CRN 107-13-1  
CMF C3 H3 N



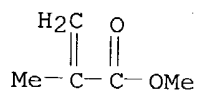
CM 5

CRN 100-42-5  
CMF C8 H8



CM 6

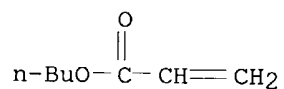
CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 4 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1999:238594 HCAPLUS  
DN 130:297599  
ED Entered STN: 19 Apr 1999  
TI Laminated, extruded plastic article  
IN Maekawa, Tomohiro  
PA Sumitomo Chemical Co., Ltd., Japan  
SO Ger. Offen., 12 pp.  
CODEN: GWXXBX  
DT Patent  
LA German  
IC ICM C08L033-10  
ICS C08L021-00; B29C047-06; B29D007-00  
CC 38-3 (Plastics Fabrication and Uses)

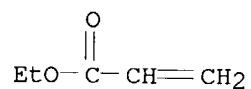
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19844716	A1	19990408	DE 1998-19844716	19980929
	TW 454028	B	20010911	TW 1998-87115616	19980918
	NL 1010198	A1	19990407	NL 1998-1010198	19980928
	NL 1010198	C2	19990525		
	JP 11165382	A2	19990622	JP 1998-277557	19980930
	CN 1221008	A	19990630	CN 1998-120825	19980930
PRAI	JP 1997-270105	A	19971002		
AB	The title articles, containing MMA resins, having very small thickness variations, and which can be subjected to a 2nd thermal forming, are prepared by subjecting MMA resins containing 0-50 phr dispersed rubbery polymer and dispersions of 1-50 parts insol. MMA resin (weight-average particle size 1-100 µm) in 100 parts MMA resin and 0-70 parts rubbery polymer to multilayer extrusion. A mixture of 100 parts PMMA and 10 parts rubbery 17.3:689:14:326:150:162 allyl methacrylate-Bu acrylate-Et acrylate-Me acrylate-MMA-styrene copolymer and a mixture of 100 parts PMMA, 14 parts I, and 9 parts crosslinked 2:17:380 ethylene glycol dimethacrylate-Me acrylate-MMA copolymer particles (particle size 33 µm) was co-extruded (thickness 0.1-1.8-0.1 mm) to give a maximum thickness variation of 0.714 mm when held at 140°.				
ST	extrusion methacrylate polymer laminate; acrylate copolymer laminate extrusion; styrene copolymer laminate extrusion; allyl methacrylate copolymer laminate extrusion; ethylene glycol dimethacrylate copolymer laminate				
IT	Extrusion of plastics and rubbers (laminated, extruded plastic article)				
IT	Laminated plastics, uses RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (laminated, extruded plastic article)				
IT	9011-14-7 36956-01-1D, Ethylene glycol dimethacrylate-methyl acrylate-methyl methacrylate copolymer, crosslinked <b>223265-65-4</b> , Allyl methacrylate-butyl acrylate-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene copolymer RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (blends; laminated, extruded plastic article)				
IT	<b>223265-65-4</b> , Allyl methacrylate-butyl acrylate-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene copolymer RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (blends; laminated, extruded plastic article)				
RN	223265-65-4 HCAPLUS				
CN	2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate, methyl 2-propenoate and 2-propenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)				
CM	1				
CRN	141-32-2				
CMF	C7 H12 O2				



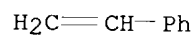
CM 2

CRN 140-88-5  
CMF C5 H8 O2



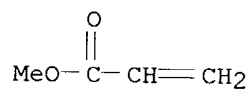
CM 3

CRN 100-42-5  
CMF C8 H8



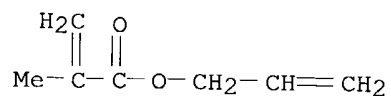
CM 4

CRN 96-33-3  
CMF C4 H6 O2



CM 5

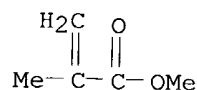
CRN 96-05-9  
CMF C7 H10 O2



CM 6

CRN 80-62-6  
CMF C5 H8 O2





L33 ANSWER 5 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1999:238593 HCAPLUS  
 DN 130:297598  
 ED Entered STN: 19 Apr 1999  
 TI Light-diffusing laminated plastic sheet  
 IN Maekawa, Tomohiro; Niihama, Ehime  
 PA Sumitomo Chemical Co., Ltd., Japan  
 SO Ger. Offen., 10 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC ICM C08L033-10  
 ICS C08L021-00; C08L025-04; C08K003-26; B29C047-06; B29D007-00  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 37, 39

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19844657	A1	19990408	DE 1998-19844657	19980929
	JP 11105207	A2	19990420	JP 1997-270104	19971002
	TW 520388	B	20030211	TW 1998-87115945	19980925
	NL 1010197	A1	19990407	NL 1998-1010197	19980928
	NL 1010197	C2	19990525		
	CN 1220283	A	19990623	CN 1998-120785	19980929
	US 6042945	A	20000328	US 1998-163191	19980930
	JP 2004090626	A2	20040325	JP 2003-190853	20030703
PRAI	JP 1997-270104	A	19971002		

AB A title sheet, useful as light-diffusing lamp and liquid-crystal display cover, etc., comprises (A) a Me methacrylate or styrene (co)polymer base layer optionally blended with ≤30% of an elastomer and containing ≤10% of dispersed solid particles (particle size 1-10 μm), laminated with (B) a layer comprising 3-70 parts of uniform dispersion of an elastomer in 100 parts of a PMMA or polystyrene resin. A typical laminate comprised 2 1,8-mm-thick outer layers (A) made of 100 parts Sumipex EXA containing 14 parts CaCO<sub>3</sub> (particle size 3 μm) coextruded with an 1.8-mm-thick inner layer (B) of acrylic copolymer rubber manufactured by copolymn. of 3 pairs of monomers: allyl methacrylate with Me methacrylate, Bu acrylate with styrene and Me acrylate with Et acrylate, in 3 successive steps.

ST light diffusing laminated plastic sheet manuf; PMMA laminate acrylic rubber light diffusing sheet; calcium carbonate dispersion polymethacrylate laminate rubber light diffusing sheet

IT Acrylic rubber

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (allyl methacrylate-Bu acrylate-Et acrylate-Me acrylate-Me methacrylate-styrene; light-diffusing laminated plastic sheet comprising acrylic rubber inner layer and methacrylate polymer outer layers)

IT Laminated plastics, uses

RL: DEV (Device component use); USES (Uses)  
 (light-diffusing laminated plastic sheet comprising acrylic rubber  
 inner layer and methacrylate polymer outer layers)

IT 9011-14-7, Sumipex EXA  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material  
 use); USES (Uses)  
 (light-diffusing laminated plastic sheet comprising acrylic rubber  
 inner layer and methacrylate polymer outer layers)

IT 471-34-1, Calcium carbonate, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (particles 3-5  $\mu$ m; light-diffusing laminated plastic sheet  
 comprising acrylic rubber inner layer and methacrylate polymer outer  
 layers containing)

IT **205237-33-8P**, Allyl methacrylate-Butyl acrylate-Ethyl  
 acrylate-Methyl acrylate-Methyl methacrylate-Styrene graft copolymer  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (rubber; light-diffusing laminated plastic sheet containing inner acrylic  
 rubber layer)

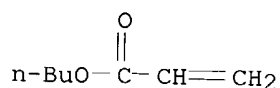
IT **205237-33-8P**, Allyl methacrylate-Butyl acrylate-Ethyl  
 acrylate-Methyl acrylate-Methyl methacrylate-Styrene graft copolymer  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (rubber; light-diffusing laminated plastic sheet containing inner acrylic  
 rubber layer)

RN 205237-33-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
 2-propenoate, ethenylbenzene, ethyl 2-propenoate, methyl 2-propenoate and  
 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

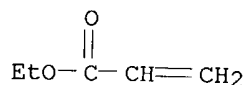
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CRN 141-32-2  
 CMF C7 H12 O2



CM 2

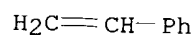
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 CMF C5 H8 O2



CM 3

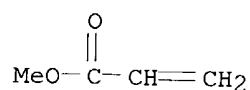
CRN 100-42-5

CMF C8 H8



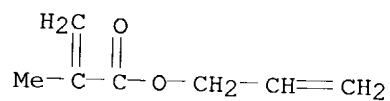
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CRN 96-33-3  
CMF C4 H6 O2



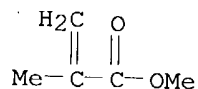
CM 5

CRN 96-05-9  
CMF C7 H10 O2



CM 6

CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 6 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1998:361061 HCAPLUS  
DN 129:123313  
ED Entered STN: 13 Jun 1998  
TI Impact-resistant methacrylic resin compositions with good moldability and processability  
IN Nokura, Koichi; Hoshiba, Takao; Otani, Mitsuo  
PA Kuraray Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C08L033-12  
ICS C08L051-00

CC 37-6 (Plastics Manufacture and Processing)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10152595	A2	19980609	JP 1996-325959	19961121
PRAI	JP 1996-325959		19961121		

AB Title compns. comprise (1) 90-99 parts impact-resistant methacrylic resins from (a) multilayer polymers prepared by grafting alkyl acrylate-based rubber layers and alkyl methacrylate-based polymer layers and/or (b) multilayer polymers prepared by grafting conjugated diolefin/alkyl acrylate-based rubber layers and alkyl methacrylate-based polymer layers and (2) 1-10 parts methacrylic polymers [viscosity-average mol. weight 300,000-3,000,000] prepared by emulsion-polymerizing monomer mixts. containing 80-100%  $\geq 1$  C1-4 alkyl methacrylates, 0-20%  $\geq 1$  C1-8 alkyl acrylates, and 0-10% other unsatd. monomers. Thus, a composition containing a 3-layer polymer [composed of 1st layer from Me methacrylate (I)/Et acrylate/allyl methacrylate (II) (24/1/0.05) mixture, 2nd layer from Bu acrylate/styrene/II (41.3/8.7/1) mixt, and 3rd layer from I/Me acrylate (III) (24/1) mixture] 60, a rigid polymer (prepared from 94 parts I and 6 parts III) 35, I homopolymer 5, and Parapet EH 100 parts showed good impact resistance, moldability, and processability.

ST impact resistance methacrylic resin blend; moldability processability methacrylic resin blend

IT Impact-resistant materials  
(impact-resistant methacrylic resin compns. with good moldability and processability)

IT Polymer blends  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(impact-resistant methacrylic resin compns. with good moldability and processability)

IT 9010-88-2P, Ethyl acrylate-methyl methacrylate copolymer 107052-86-8P, Allyl methacrylate-butyl acrylate-methyl methacrylate graft copolymer 110254-00-7P, Allyl methacrylate-butyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer 150732-38-0P, Allyl methacrylate-butyl acrylate-1,3-butylene glycol dimethacrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer 156697-84-6P, Butadiene-butyl acrylate-methyl acrylate-methyl methacrylate graft copolymer **205237-33-8P**, Allyl methacrylate-butyl acrylate-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(impact-resistant methacrylic resin compns. with good moldability and processability)

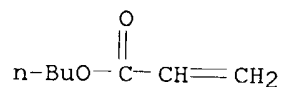
IT 9011-14-7, Parapet EH 9011-87-4, Parapet HR-L  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(impact-resistant methacrylic resin compns. with good moldability and processability)

IT **205237-33-8P**, Allyl methacrylate-butyl acrylate-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(impact-resistant methacrylic resin compns. with good moldability and processability)

RN 205237-33-8 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
2-propenoate, ethenylbenzene, ethyl 2-propenoate, methyl 2-propenoate and  
2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

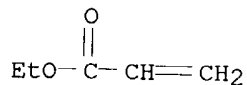
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CRN 141-32-2  
CMF C7 H12 O2



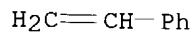
CM 2

CRN 140-88-5  
CMF C5 H8 O2



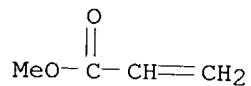
CM 3

CRN 100-42-5  
CMF C8 H8



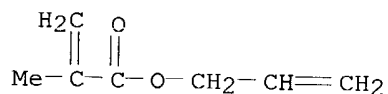
CM 4

CRN 96-33-3  
CMF C4 H6 O2



CM 5

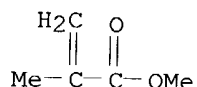
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CMF C7 H10 O2



CM 6

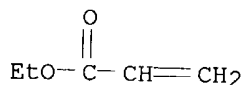
CRN 80-62-6

CMF C5 H8 O2



L33 ANSWER 7 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1998:358361 HCAPLUS  
 DN 129:82710  
 ED Entered STN: 13 Jun 1998  
 TI A study on correlation between monomer compositions and physical properties of acrylic sizes  
 AU Kim, Joon Ho; Yu, Jeung Mog; Park, Chan Jun  
 CS School Textiles, Yeungnam University, Kyongsan, S. Korea  
 SO Han'guk Somyu Konghakhoechi (1998), 35(3), 174-181  
 CODEN: HSKCDQ; ISSN: 1225-1089  
 PB Korean Fiber Society  
 DT Journal  
 LA Korean  
 CC 40-7 (Textiles and Fibers)  
 AB The expts. were carried out on the minute control of monomer composition in acrylic sizes, which were used in manufacturing plant of com. acrylic sizes. The acrylic sizes were synthesized by solution and emulsion polymerization, and the effects of composition change were investigated. With the control in composition of acrylic monomer, it was possible to synthesize acrylic sizes with available phys. properties within the Tg range of 15 °C. As the mole fraction of Et acrylate monomer increased, swelling property of acrylic size films increased, but the pick-up property of the size was not changed. From viscoelasticity measurements, it was estimated that the rheol. property stability at higher temperature sizing process was higher for the solution-polymerized sizes than for the emulsion-polymerized ones. As size pick-up increased, the phys. properties of the sized yarn were improved and the process availability of composition-controlled acrylic sizes was sufficient.  
 ST acrylic size textile compn property relationship; finish spinning oil compatibility acrylic size; swelling viscoelasticity glass transition acrylic size  
 IT Glass transition  
 Sizes (agents)  
 Swelling, physical  
 Viscoelasticity  
 (correlation between monomer compns. and phys. properties of acrylic sizes)

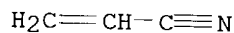
- IT **209284-90-2**, Acrylic acid-acrylonitrile-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene copolymer  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES  
 (Uses)  
 (emulsion-polymerized; correlation between monomer compns. and phys. properties of acrylic sizes)
- IT 36355-51-8, Acrylic acid-acrylonitrile-ethyl acrylate-methyl methacrylate copolymer  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES  
 (Uses)  
 (solution-polymerized; correlation between monomer compns. and phys. properties of acrylic sizes)
- IT **209284-90-2**, Acrylic acid-acrylonitrile-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene copolymer  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES  
 (Uses)  
 (emulsion-polymerized; correlation between monomer compns. and phys. properties of acrylic sizes)
- RN 209284-90-2 HCAPLUS
- CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with ethenylbenzene, ethyl 2-propenoate, methyl 2-propenoate, 2-propenenitrile and 2-propenoic acid (9CI) (CA INDEX NAME)
- CM 1
- CRN 140-88-5
- CMF C5 H8 O2



CM 2

CRN 107-13-1

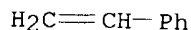
CMF C3 H3 N



CM 3

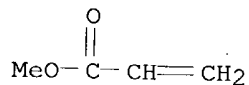
CRN 100-42-5

CMF C8 H8



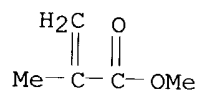
CM 4

CRN 96-33-3  
CMF C4 H6 O2



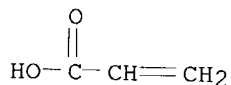
CM 5

CRN 80-62-6  
CMF C5 H8 O2



CM 6

CRN 79-10-7  
CMF C3 H4 O2



L33 ANSWER 8 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1998:197955 HCAPLUS  
DN 128:258085  
ED Entered STN: 06 Apr 1998  
TI Impact-resistant methacrylic polymer compositions with good moldability  
and processability  
IN Otani, Mitsuo; Nokura, Koichi  
PA Kuraray Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C08L033-12  
ICS C08L051-06  
CC 37-6 (Plastics Manufacture and Processing)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10081805	A2	19980331	JP 1996-253918	19960904
PRAI	JP 1996-253918		19960904		
AB	Title compns. comprise 0-900 parts methacrylic polymers and 100 parts mixts. from (1) 50-98% multilayer polymers composed of (a) ≥1 flexible polymer layers prepared by emulsion-polymerizing 50-99.9% ≥1				



C1-18 alkyl acrylates (AA), 0.1-5% multifunctional crosslinking monomers (MCM) and/or multifunctional graft monomers (MGM), and 0-49.9% other unsatd. monomers (UM) or by emulsion-polymerizing 20-100% conjugated diolefins, 0-80%  $\geq 1$  C1-8 AA, 0-5% MCM and/or MGM, and 0-50% UM and (b)  $\geq 1$  rigid polymer layers prepared by emulsion-polymerizing 50-100%  $\geq 1$  C1-4 alkyl methacrylates (AM), 0-5% MCM and/or MGM, and 0-50% UM to have a rigid polymer outermost layer from 50-100%  $\geq 1$  C1-4 AM and 0-50% UM and (2) 2-50% rigid 3-layer polymers from (c) 1-20% 1st layer prepared by emulsion-polymerizing 40-90%  $\geq 1$  C1-4 AM, 10-60%  $\geq 1$  C1-8 AA, and 0-20% UM in the presence of 0.1-2% chain-transfer agents (CTA), (d) 1-40% 2nd layer prepared by emulsion-polymerizing 80-100%  $\geq 1$  C1-4 AM, 0-20%  $\geq 1$  C1-8 AA, 0-1% MCM and/or MGM, and 0-20% UM in the presence of  $\leq 0.1\%$  CTA, and (e) 40-98% 3rd layer prepared by emulsion-polymerizing 50-100%  $\geq 1$  C1-4 AM, 0-20%  $\geq 1$  C1-8 AA, and 0-50% UM in the presence of 0.1-1% CTA. Thus, a composition containing a multilayer polymer [having 0.05:1:24 allyl methacrylate (I)-Et acrylate-Me methacrylate (II) copolymer layer, 1:41.3:8.7 I-Bu acrylate-styrene copolymer layer, and 1:24 Me acrylate (III)-II copolymer outermost layer] 70, a 3-layer polymer (having 2:4 III-II copolymer 1st layer, II homopolymer 2nd layer, and 4:66 III-II copolymer 3rd layer) 30, and Parapet EH Beads (methacrylic polymer) 200 parts was mixed and extruded to give an impact-resistant sheet with good moldability, and processability.

- ST impact resistance methacrylic polymer blend; moldability methacrylic resin blend; processability methacrylic resin blend; multilayer polymer methacrylic resin blend
- IT Impact-resistant materials  
(impact-resistant methacrylic polymer compns. with good moldability and processability)
- IT Polymer blends  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(impact-resistant methacrylic polymer compns. with good moldability and processability)
- IT 111-88-6, n-Octylmercaptan  
RL: NUU (Other use, unclassified); USES (Uses)  
(chain-transfer agent; impact-resistant methacrylic polymer compns. with good moldability and processability)
- IT 9011-14-7, Parapet EH 9011-87-4, Parapet HR-L  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(impact-resistant methacrylic polymer compns. with good moldability and processability)
- IT 107052-86-8P, Allyl methacrylate-butyl acrylate-methyl methacrylate graft copolymer 110254-00-7P, Allyl methacrylate-butyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer 150732-38-0P 156697-84-6P, Butadiene-butyl acrylate-methyl acrylate-methyl methacrylate graft copolymer **205237-33-8P**, Allyl methacrylate-butyl acrylate-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(multilayer; impact-resistant methacrylic polymer compns. with good moldability and processability)
- IT 113547-51-6P, Ethyl acrylate-methyl methacrylate graft copolymer 138128-39-9P, Methyl acrylate-methyl methacrylate graft copolymer 150408-81-4P, Butyl acrylate-methyl acrylate-methyl methacrylate graft

copolymer

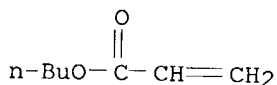
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(three-layer; impact-resistant methacrylic polymer compns. with good moldability and processability)

IT **205237-33-8P**, Allyl methacrylate-butyl acrylate-ethyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (multilayer; impact-resistant methacrylic polymer compns. with good moldability and processability)  
 RN 205237-33-8 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate, methyl 2-propenoate and 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

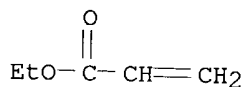
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CRN 141-32-2  
 CMF C7 H12 O2



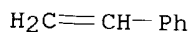
CM 2

CRN 140-88-5  
 CMF C5 H8 O2



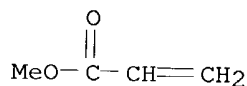
CM 3

CRN 100-42-5  
 CMF C8 H8



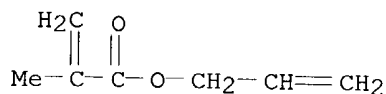
CM 4

CRN 96-33-3  
 CMF C4 H6 O2



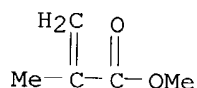
CM 5

CRN 96-05-9  
CMF C7 H10 O2



CM 6

CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 9 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1998:178234 HCAPLUS  
DN 128:258046  
ED Entered STN: 26 Mar 1998  
TI Methacrylate polymer composition for extrudate with good impact resistance and good moldability  
IN Otani, Mitsuo; Hoshiba, Takao; Nokura, Koichi  
PA Kuraray Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C08L051-00  
ICS C08L033-10; C08F002-22; C08F002-38; C08F265-06; C08F285-00  
CC 37-6 (Plastics Manufacture and Processing)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10072543	A2	19980317	JP 1996-325958	19961121
PRAI	JP 1996-195477		19960705		

AB The composition comprises a mixture of a multilayer-structured acrylic polymer 30-99, a hard thermoplastic polymer 0-69, and a two layer-structured polymer 1-20%, and optionally, a methacrylic polymer. Thus, an extrudate having Izod impact strength 4.2 kg-cm/cm, heat distortion temp 93° and haze 1% was prepared from a mixture of a 3-layer-structured polymer latex of MMA-Et acrylate (I)-allyl methacrylate (II) copolymer/Bu

acrylate-styrene-II copolymer/MMA-Me acrylate (III) copolymer 60, two-layer-structured polymer of MMA-III copolymer/MMA-III copolymer 35, a two-layer-structured polymer of MMA-I copolymer/PMMA 5 and Parapet EH 200 parts.

ST impact resistance methacrylate copolymer compn moldability; styrene acrylate copolymer blend impact

IT Acrylic polymers, properties  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (core-shell, multilayer; methacrylate polymer composition for extrudate with good impact resistance and good moldability)

IT Impact-resistant materials  
 (methacrylate polymer composition for extrudate with good impact resistance and good moldability)

IT Polymer blends  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (methacrylate polymer composition for extrudate with good impact resistance and good moldability)

IT 107052-86-8, Allyl methacrylate-butyl acrylate-methyl methacrylate graft copolymer 110254-00-7, Allyl methacrylate-butyl acrylate-methyl acrylate-methyl methacrylate-styrene graft copolymer 111768-67-3, Butyl acrylate-methyl methacrylate graft copolymer 113547-51-6, Ethyl acrylate-methyl methacrylate graft copolymer 138128-39-9 150732-38-0 156697-84-6 **205237-33-8**  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (core-shell, multilayer; methacrylate polymer composition for extrudate with good impact resistance and good moldability)

IT 9011-14-7, Parapet EH 9011-87-4, Parapet HR-L  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (methacrylate polymer composition for extrudate with good impact resistance and good moldability)

IT **205237-33-8**  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (core-shell, multilayer; methacrylate polymer composition for extrudate with good impact resistance and good moldability)

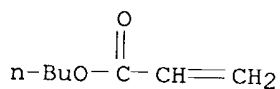
RN 205237-33-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate, methyl 2-propenoate and 2-propenyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

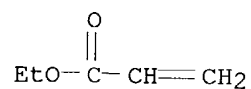
CRN 141-32-2

CMF C7 H12 O2



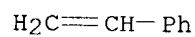
CM 2

CRN 140-88-5  
CMF C5 H8 O2



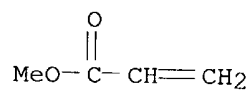
CM 3

CRN 100-42-5  
CMF C8 H8



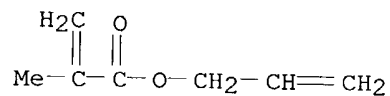
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CRN 96-33-3  
CMF C4 H6 O2



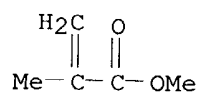
CM 5

CRN 96-05-9  
CMF C7 H10 O2



CM 6

CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 10 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1998:174004 HCAPLUS  
 DN 128:180925  
 ED Entered STN: 25 Mar 1998  
 TI Synthesis and application of self-crosslinking acrylate emulsion  
 AU Fan, Heping; Yu, Jie; Chen, Zongyuan; Wang, Luoli  
 CS Hubei Research Institute of Chemistry, Wuhan, 430074, Peop. Rep. China  
 SO Zhongguo Jiaonianji (1998), 7(1), 1-4, 7  
 CODEN: ZJIAEA; ISSN: 1004-2849  
 PB Zhongguo Jiaonianji Bianjibu  
 DT Journal  
 LA Chinese  
 CC 37-3 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 35, 38  
 AB This article studied the self-crosslinking acrylate emulsion that contains more than two kinds of reactive groups and explored the conditions of synthesis and application. The emulsion can be used for adhering polyimide film and copper foil. The FPC (flexible printing circuit) substrates with the emulsion composition have good applied properties.  
 ST acrylate emulsion self crosslinking prepn; polyimide copper foil acrylate emulsion adhesion  
 IT Surfactants  
 (anionic; for synthesis of self-crosslinking acrylate emulsion)  
 IT Adhesion, physical  
 (application of self-crosslinking acrylate emulsion for adhering polyimide-copper foil)  
 IT Polyimides, miscellaneous  
 RL: MSC (Miscellaneous)  
 (application of self-crosslinking acrylate emulsion for adhering polyimide-copper foil)  
 IT Crosslinking agents  
 (effect on synthesis and application of self-crosslinking acrylate emulsion)  
 IT Polymerization  
 (emulsion, seed; synthesis and application of self-crosslinking acrylate emulsion)  
 IT Adhesives  
 (emulsion; application of self-crosslinking acrylate emulsion for adhering polyimide-copper foil)  
 IT Emulsifying agents  
 (for synthesis of self-crosslinking acrylate emulsion)  
 IT Surfactants  
 (nonionic; for synthesis of self-crosslinking acrylate emulsion)  
 IT Crosslinking  
 (synthesis and application of self-crosslinking acrylate emulsion)  
 IT 7440-50-8, Copper, miscellaneous  
 RL: MSC (Miscellaneous)  
 (application of self-crosslinking acrylate emulsion for adhering polyimide-copper foil)  
 IT **149729-50-0P**, Acrylonitrile-butyl acrylate-ethyl acrylate-2-ethylhexyl acrylate-methyl methacrylate-styrene copolymer  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (crosslinked; synthesis and application of self-crosslinking acrylate emulsion)  
 IT **149729-50-0P**, Acrylonitrile-butyl acrylate-ethyl acrylate-2-ethylhexyl acrylate-methyl methacrylate-styrene copolymer

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(crosslinked; synthesis and application of self-crosslinking acrylate emulsion)

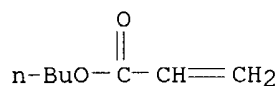
RN 149729-50-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, 2-ethylhexyl 2-propenoate, ethyl 2-propenoate and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

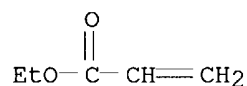
CMF C7 H12 O2



CM 2

CRN 140-88-5

CMF C5 H8 O2



CM 3

CRN 107-13-1

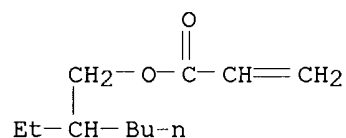
CMF C3 H3 N



CM 4

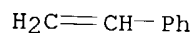
CRN 103-11-7

CMF C11 H20 O2



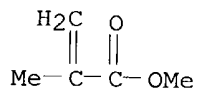
CM 5

CRN 100-42-5  
CMF C8 H8



CM 6

CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 11 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1995:792794 HCAPLUS  
DN 123:199743  
ED Entered STN: 15 Sep 1995  
TI Block polymer, thermoplastic addition polymer, production process, and use  
IN Yoshida, Masatoshi; Kobayashi, Nobuhiro; Hasegawa, Hiroaki  
PA Nippon Shokubai Co., Ltd., Japan  
SO PCT Int. Appl., 157 pp.  
CODEN: PIXXD2  
DT Patent  
LA Japanese  
IC ICM C08F293-00  
ICS C09J153-00; C08L053-00; C08G075-14; C09J201-00; C09J201-02;  
C09J133-06  
CC 35-4 (Chemistry of Synthetic High Polymers)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9518162	A1	19950706	WO 1994-JP2198	19941222
	W: CN, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	JP 07179538	A2	19950718	JP 1993-328954	19931224
	JP 2842782	B2	19990106		
	JP 08165462	A2	19960625	JP 1994-309189	19941213
	JP 3377315	B2	20030217		
	JP 2000303048	A2	20001031	JP 2000-69536	19941213
	JP 3534340	B2	20040607		
	JP 08176519	A2	19960709	JP 1994-318630	19941221
	EP 686653	A1	19951213	EP 1995-903944	19941222
	EP 686653	B1	19990818		
	R: BE, DE, FR, GB, IT, NL				
	CN 1118167	A	19960306	CN 1994-191285	19941222
	CN 1077900	B	20020116		
	US 5679762	A	19971021	US 1995-507243	19950818
	US 5869598	A	19990209	US 1997-872212	19970610



PRAI JP 1993-328954 A 19931224  
 JP 1994-309189 A 19941213  
 JP 1994-318630 A 19941221  
 WO 1994-JP2198 W 19941222  
 US 1995-507243 A3 19950818

AB The title polymer useful in various applications including hot-melt resin composition, pressure-sensitive adhesive and support for pressure-sensitive adhesive has a configuration comprising a polyvalent mercaptan unit as the center and a number of polymer segments projecting therefrom radially, and has Mn 2,000-1,000,000. The polymer segments have at least two different compns. The block polymer is produced by at least two-stage free-radical polymerization of various polymerizable monomer components having different compns. by using a polyvalent mercaptan as the polymerization initiator.

Styrene

was polymerized in the presence of pentaerythritol tetrakis(thioglycolate) to obtain a radial polymer, then Bu acrylate and acrylic acid were polymerized in the above polymerization mixture to obtain a resilient block copolymer with Mn 39,000, mol. weight distribution 8.1, and Tg -35° and +90°.

ST styrene acrylic block copolymer adhesive; pressure sensitive adhesive block copolymer

IT Adhesives

(pressure-sensitive, block polymer, thermoplastic addition polymer, production process, and use)

IT **167936-21-2P**

RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
 (2block polymer, thermoplastic addition polymer, production process, and use)

IT 106911-77-7P, Methyl methacrylate-styrene block copolymer 108146-73-2P, Acrylonitrile-butadiene-styrene block copolymer 131830-42-7P  
 167770-42-5P 167770-43-6P 167770-44-7P 167770-45-8P 167770-46-9P  
 167770-47-0P 167770-48-1P 167936-22-3P 167936-23-4P 167936-24-5P  
 168146-34-7P

RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
 (block polymer, thermoplastic addition polymer, production process, and use)

IT 4756-13-2, 1,2,3-Propanetriethiol 10193-99-4, Pentaerythritol tetrakis(thioglycolate) 33007-83-9, Trimethylolpropane tris(3-mercaptopropionate)

RL: NUU (Other use, unclassified); USES (Uses)  
 (block polymer, thermoplastic addition polymer, production process, and use)

IT **167936-21-2P**

RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
 (2block polymer, thermoplastic addition polymer, production process, and use)

use)

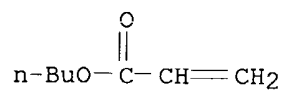
RN 167936-21-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate and 2-propenenitrile, block (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

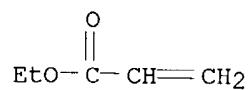
CMF C7 H12 O2



CM 2

CRN 140-88-5

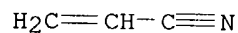
CMF C5 H8 O2



CM 3

CRN 107-13-1

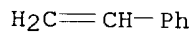
CMF C3 H3 N



CM 4

CRN 100-42-5

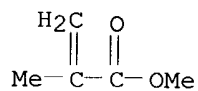
CMF C8 H8



CM 5

CRN 80-62-6

CMF C5 H8 O2



L33 ANSWER 12 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1993:519621 HCAPLUS

DN 119:119621

ED Entered STN: 18 Sep 1993

TI Anticorrosive surface-treated steel sheets with good overcoatability and blackening resistance at processed parts

IN Izumi, Keiji; Tanaka, Hidetoshi; Taketsu, Hirobumi; Uchida, Yukio

PA Nisshin Steel Co Ltd, Japan  
 SO Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM B05D007-24  
 ICS B05D003-10; B05D007-14; B32B015-08; C08K003-36; C08K005-00;  
 C08K005-54; C08L033-06; C09D125-14  
 CC 42-7 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 55

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05092173	A2	19930416	JP 1991-278623	19910930
PRAI	JP 1991-278623		19910930		

AB The title sheets are manufactured by forming chromate coatings on plated steel sheets and further forming coatings containing (meth)acrylic-styrene copolymers (styrene content 10-40 mol%), SiO<sub>2</sub> and/or silica sol, and silane coupling agents at Si content 5-25%, and optionally 1-25 phr lubricants. Thus, coating a Zn-Ni alloy-coated steel sheet with a solution containing Cr compds., silica sol, H<sub>3</sub>PO<sub>4</sub>, and H<sub>3</sub>BO<sub>3</sub>, drying at 200°, coating with a solution containing 25:25:20:30 (mol) Et acrylate-Bu acrylate-2-ethylhexyl acrylate-styrene copolymer, 10% (based on Si) silica sol, and 5% (based on Si) vinyltrimethoxysilane, and drying at 100° gave a test piece showing good blackening resistance in a draw bead test, good adhesion of Superlac F 47, and no rust formation on 100-h salt water spray test.

ST methacrylic polymer coating steel anticorrosive; acrylic polymer coating steel anticorrosive; overcoatability steel coating styrene polymer; blackening resistance steel coating

IT Lubricants  
 Silica gel, uses  
 RL: USES (Uses)  
 (acrylic-styrene polymer coatings containing, for steel sheets, with corrosion resistance and overcoatability)

IT Silanes  
 RL: USES (Uses)  
 (coupling agents, acrylic-styrene polymer coatings containing, for steel sheets, with corrosion resistance and overcoatability)

IT Coupling agents  
 (silanes, acrylic-styrene polymer coatings containing, for steel sheets, with corrosion resistance and overcoatability)

IT Chromates  
 RL: USES (Uses)  
 (steel sheets precoated with, acrylic-styrene polymer coatings for, with good corrosion resistance and overcoatability)

IT Coating materials  
 (anticorrosive, acrylic-styrene polymers, for steel sheets, with good overcoatability)

IT 7631-86-9, Silica, uses  
 RL: USES (Uses)  
 (acrylic-styrene polymer coatings containing, for steel sheets, with corrosion resistance and overcoatability)

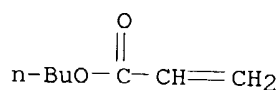
IT 68683-41-0 79501-80-7 149729-49-7 **149729-50-0**  
**149729-51-1** 149729-52-2  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (coatings, on chromated steel sheets, anticorrosive, with good

- overcoatability)
- IT 2768-02-7, Vinyltrimethoxysilane  
RL: USES (Uses)  
(coupling agents, acrylic-styrene polymer coatings containing, for steel sheets, with corrosion resistance and overcoatability)
- IT 7782-42-5, Graphite, uses  
RL: USES (Uses)  
(lubricant, acrylic-styrene polymer coatings containing, for steel sheets, with corrosion resistance and overcoatability)
- IT 12597-69-2  
RL: USES (Uses)  
(lubricants, acrylic-styrene polymer coatings containing, for steel sheets, with corrosion resistance and overcoatability)
- IT 12597-69-2, Steel, miscellaneous  
RL: MSC (Miscellaneous)  
(sheets, coatings for, acrylic-styrene polymers as, anticorrosive, with good overcoatability)
- IT 9002-88-4, Polyethylene  
RL: USES (Uses)  
(wax, lubricant, acrylic-styrene polymer coatings containing, for steel sheets, with corrosion resistance and overcoatability)
- IT **149729-50-0 149729-51-1**  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coatings, on chromated steel sheets, anticorrosive, with good overcoatability)
- RN 149729-50-0 HCAPLUS
- CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, 2-ethylhexyl 2-propenoate, ethyl 2-propenoate and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

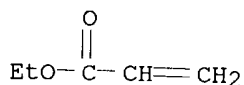
CMF C7 H12 O2



CM 2

CRN 140-88-5

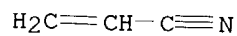
CMF C5 H8 O2



CM 3

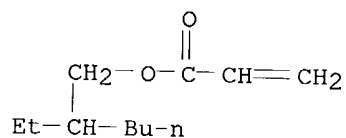
CRN 107-13-1

CMF C3 H3 N



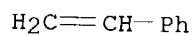
CM 4

CRN 103-11-7  
CMF C11 H20 O2



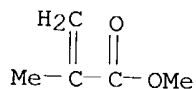
CM 5

CRN 100-42-5  
CMF C8 H8



CM 6

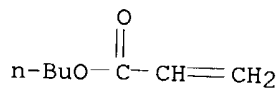
CRN 80-62-6  
CMF C5 H8 O2



RN 149729-51-1 HCAPLUS  
CN 2-Propenoic acid, butyl ester, polymer with ethenylbenzene, 2-ethylhexyl  
2-propenoate, ethyl 2-propenoate, methyl 2-propenoate and 2-propenenitrile  
(9CI) (CA INDEX NAME)

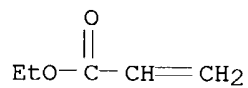
CM 1

CRN 141-32-2  
CMF C7 H12 O2



CM 2

CRN 140-88-5  
CMF C5 H8 O2



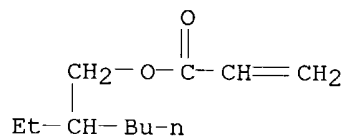
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CRN 107-13-1  
CMF C3 H3 N



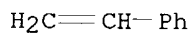
CM 4

CRN 103-11-7  
CMF C11 H20 O2



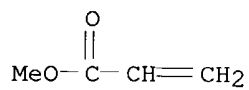
CM 5

CRN 100-42-5  
CMF C8 H8



CM 6

CRN 96-33-3  
CMF C4 H6 O2



L33 ANSWER 13 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1988:438924 HCAPLUS

DN 109:38924

ED Entered STN: 05 Aug 1988

TI Weather- and heat-resistant polyimide compositions

IN Hayashi, Nobuyuki; Saito, Kyotaka

PA Denki Kagaku Kogyo K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08L035-06

ICS C08L025-02; C08L051-00

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 39

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63003053	A2	19880108	JP 1986-146090	19860624
	JP 07025965	B4	19950322		
PRAI	JP 1986-146090		19860624		

AB Comps. useful in preparing automobile instrument panels, solar heater parts, etc. are prepared from copolymers (comprising aromatic vinyl 35-80, unsatd. dicarboxylic acid imide derivs. 20-65, vinyl monomers 0-30, and rubbers 0-30%) 10-90, graft copolymers (comprising 5-80 parts copolymers prepared from C1-13 alkyl acrylate 60-99.99, vinyl monomer 0-40, crosslinkable compds. containing  $\geq 2$  C:C double bonds 0.01-20% grafted with 20-95 parts 40-90:0-40:0-40 aromatic vinyl-cyanovinyl-vinyl compound mixture) 10-90, and 40-90:0-40:0-40 aromatic vinyl-cyanovinyl-vinyl compound copolymers 0-80%. Thus, a mixture of 57 parts aniline-imidated 42:58 maleic anhydride-styrene copolymer and 43 parts 25:75 acrylonitrile-styrene mixture-grafted poly(Bu acrylate) [weight-average mol. weight of THF sols. (Mw) 138,000] was injection molded to give a sheet having unnotched Izod impact strength 40 kg-cm/cm, the impact strength retaining after 1000 h weathering test 38 kg-cm/cm, and Vicat softening point 156°, vs. 18, 16, and 155, resp., for a sheet containing a graft copolymer with Mw 89,000.

ST weather resistance polyimide blend; heat resistance polyimide blend; grafted polybutyl acrylate polyimide blend; aniline imidated furandione styrene copolymer

IT Heat-resistant materials

(blends of polyimides and grafted acrylic polymers as)

IT Plastics, molded

RL: USES (Uses)

(blends of polyimides and grafted acrylic polymers as, heat-shock resistant)

IT Polyimides, uses and miscellaneous

RL: USES (Uses)

(blends with grafted acrylic polymers, weather- and heat-resistant)

IT Weathering

(resistance to, of blends of polyimides and grafted acrylic polymers)

IT 16219-75-3D, polymers with acrylic monomers and maleic anhydride and styrene, graft, reaction products with aniline

RL: USES (Uses)

(blends with grafted acrylic polymers, heat- and weather-resistant)

IT 62-53-3D, Aniline, reaction products with maleic anhydride-styrene copolymer 100-42-5D, Styrene, polymer with acrylonitrile and acrylic

rubber and maleic anhydride, imidated 107-13-1D, 2-Propenenitrile, polymer with styrene and acrylic rubber and maleic anhydride, imidated 108-31-6D, 2,5-Furandione, polymer with styrene and acrylonitrile and acrylic rubber, imidated 9011-13-6D, aniline-imidated  
 RL: USES (Uses)

(blends with grafted acrylic polymers, weather- and heat-resistant)  
 IT 9003-54-7, Acrylonitrile-styrene copolymer  
 RL: USES (Uses)

(blends with polyimides and grafted acrylic polymers, weather- and heat-resistant)

IT 108554-70-7, Acrylonitrile-butyl acrylate-styrene graft copolymer  
**115358-18-4**

RL: USES (Uses)

(blends with polyimides, weather- and heat-resistant)

IT **115358-18-4**

RL: USES (Uses)

(blends with polyimides, weather- and heat-resistant)

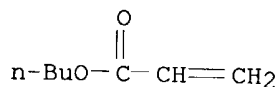
RN 115358-18-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate and 2-propenenitrile, graft (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

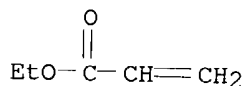
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CM 2

CRN 140-88-5

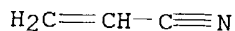
CMF C5 H8 O2



CM 3

CRN 107-13-1

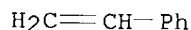
CMF C3 H3 N



CM 4

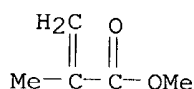


CRN 100-42-5  
CMF C8 H8



CM 5

CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 14 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1988:113809 HCAPLUS  
DN 108:113809  
ED Entered STN: 01 Apr 1988  
TI Highly glossy weather-resistant resin compositions  
IN Hayashi, Nobuyuki  
PA Denki Kagaku Kogyo K. K., Japan  
SO Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF

DT Patent  
LA Japanese  
IC ICM C08L051-00  
ICS C08L025-02; C08L051-00  
CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 35, 37

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62223256	A2	19871001	JP 1986-65975	19860326
PRAI	JP 1986-65975		19860326		

AB Comps. with good impact resistance and useful in preparing automobile parts, building materials, etc. comprise 10-100% graft copolymers [100 parts elastic polymer (prepared from C1-3 alkyl acrylate 60-99.99, vinyl or vinylidene monomer 0-40, and crosslinkable compds. containing  $\geq 2$  double bonds 0.01-20.0%) grafted by 20-900 parts mixture of aromatic vinyl monomers (A) 40-90, cyanovinyl monomers (B) 0-40, and vinyl monomers (C) 0-40% in presence of 0.01-5.0% (based on the monomers) peroxide MeCOOR or MeCO2OR (R = H, alkyl, acyl, or alkyloxycarbonyl)] and 0-90% copolymer prepared from A 40-90, B 0-40, and C 0-40%. Thus, Bu acrylate-divinylbenzene copolymer was grafted with acrylonitrile-styrene mixture in presence of tert-Bu peroxyacetate (I) to give a graft copolymer which was injection molded to give a sheet having notched Izod impact strength 20 kg-cm/cm, gloss 88%, and weather resistance (impact strength after exposed 500 h to UV radiation) 18 kg-cm/cm, vs. 9, 48, and 6.5, resp., for a sheet containing cumene hydroperoxide instead of I.

ST butyl peroxyacetate graft polymn initiator; gloss graft acrylic polymer

molding; weatherability acrylic graft polymer molding; divinylbenzene graft copolymer weatherability; acrylonitrile graft copolymer weatherability; styrene graft copolymer weatherability

IT Plastics, molded  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (acrylic graft polymer-SAN polymer blends, highly glossy, impact- and weather-resistant)

IT Impact strength  
 Luster  
 (of acrylic graft copolymer and SAN polymer blends)

IT Weathering  
 (resistance to, of acrylic graft copolymer and SAN polymer blends)

IT 9003-54-7P, Acrylonitrile-styrene copolymer  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (preparation of, blends with acrylic graft copolymer, for highly glossy and weather-resistant moldings)

IT 113376-96-8P 113376-97-9P **113376-98-0P**  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (preparation of, blends with acrylonitrile-styrene copolymer, for highly glossy and weather-resistant moldings)

IT 113376-95-7P  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (preparation of, for highly glossy and weather-resistant moldings)

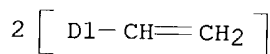
IT **113376-98-0P**  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (preparation of, blends with acrylonitrile-styrene copolymer, for highly glossy and weather-resistant moldings)

RN 113376-98-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, diethenylbenzene, ethenylbenzene, ethyl 2-propenoate and 2-propenenitrile, graft (9CI) (CA INDEX NAME)

CM 1

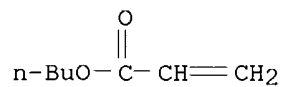
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 CMF C10 H10  
 CCI IDS



CM 2

CRN 141-32-2

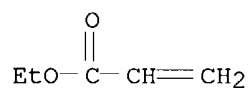
CMF C7 H12 O2



CM 3

CRN 140-88-5

CMF C5 H8 O2



CM 4

CRN 107-13-1

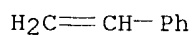
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CM 5

CRN 100-42-5

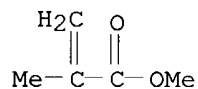
CMF C8 H8



CM 6

CRN 80-62-6

CMF C5 H8 O2



L33 ANSWER 15 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1988:7459 HCAPLUS

DN 108:7459

ED Entered STN: 09 Jan 1988

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

TI Self-crosslinkable acrylic ester random copolymer for textile treatment  
 IN Moriya, Yasuo; Aoyama, Kiyoshi  
 PA Nippon Oils & Fats Co., Ltd., Japan; Negami Chemical Industrial Co., Ltd.  
 SO Jpn. Kokai Tokkyo Koho, 17 pp.  
 CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08F220-12

ICS D06M015-263

ICI C08F220-12, C08F218-00

CC 40-9 (Textiles and Fibers)

Section cross-reference(s): 35, 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62096507	A2	19870506	JP 1985-238310	19851024
PRAI	JP 1985-238310		19851024		

AB Title copolymers, which impart water repellence with good dry-cleaning-fastness, durability, and handle to fabrics, have number-average mol. weight (.hivin.Mn) 1000-500,000 and active O 0.02-1.84%, and comprises 0.2-20 mol% peroxy carbonate-containing repeating units derived from CH<sub>2</sub>:CRCH<sub>2</sub>OCOO<sub>2</sub>CR<sub>1</sub>R<sub>2</sub>R<sub>3</sub> (R = H, C1-4 alkyl; R<sub>1</sub>, R<sub>2</sub> = C1-4 alkyl; R<sub>3</sub> = C1-12 alkyl, C3-12 cycloalkyl, Ph), 20-99.3 mol% acrylate repeating units derived from acrylic esters, and 0.5-79.8 mol% repeating units derived from conjugated monomers copolymerizable with acrylates. Thus, 500 mL 1% aqueous poly(vinyl alc.), 50 g Et acrylate, 130 g Bu acrylate, 5 g CH<sub>2</sub>:CHCH<sub>2</sub>OCOO<sub>2</sub>C(CH<sub>3</sub>)<sub>3</sub> (I), and acrylonitrile 20 g were polymerized using AIBN at .apprx.70° for 6 h to give a copolymer (II) having active O content 0.1% and .hivin.Mn 48,000. Nylon taffeta coated with a 25% solution of II in PhMe, dried at 100° for 60 s, then post-heated at 200° for 60, 120 and 180 s had H<sub>2</sub>O-resistant pressure 600, 600 and 600 mm H<sub>2</sub>O, resp., initially, and 250, 450 and 540 mm H<sub>2</sub>O, resp., after dry cleaning, vs. 600, 600, 600, 130, 135, and 130, resp., without the I.

ST fabric finish self crosslinking polyacrylate; peroxy carbonate contg acrylate ester copolymer; allyl peroxy carbonate acrylate ester copolymer; cleaning dry fastness waterproofer fabric; fastness waterproofer fabric; coating fabric autocrosslinking acrylic copolymer

IT Textiles

Polyamide fibers, uses and miscellaneous

RL: USES (Uses)

(finishing agents for, peroxy carbonate containing (meth)acrylate ester copolymers as, with good dry-cleaning fastness)

IT Allylic compounds

RL: USES (Uses)

(peroxy carbonates, polymers, self-crosslinking, waterproofing textile finishes with good dry-cleaning fastness)

IT Heat-resistant materials

Light-resistant materials

(textile finishes, self-crosslinking peroxy allyl carbonate copolymers as)

IT Waterproofing

(agents, for textiles, self-crosslinking peroxy allyl carbonate copolymers, with good dry-cleaning fastness)

IT Crosslinking catalysts

(auto-, peroxy allyl carbonate copolymers, for waterproofing textiles with good dry-cleaning fastness)

IT Coating materials

(solvent- and water-resistant, for fabrics, self-crosslinkable peroxy allyl carbonate copolymers as)

IT 563-69-9D, O,O-alkyl O-alkenyl esters, polymers **111907-73-4**  
 111907-74-5 **111907-75-6 111907-76-7** 111907-77-8  
 111907-78-9 111907-79-0 111907-80-3 111907-81-4 111907-82-5  
 111907-83-6 111907-84-7  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES  
 (Uses)  
 (waterproofing finishes for textiles, self-crosslinkable,  
 dry-cleaning-fast)

IT **111907-73-4 111907-75-6 111907-76-7**  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES  
 (Uses)  
 (waterproofing finishes for textiles, self-crosslinkable,  
 dry-cleaning-fast)

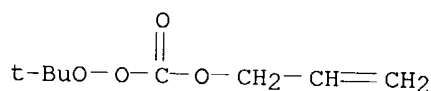
RN 111907-73-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
 2-propenoate, OO-(1,1-dimethylethyl) O-2-propenyl carbonoperoxoate,  
 ethenylbenzene, ethyl 2-propenoate and 2-propenenitrile (9CI) (CA INDEX  
 NAME)

CM 1

CRN 65700-08-5

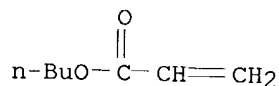
CMF C8 H14 O4



CM 2

CRN 141-32-2

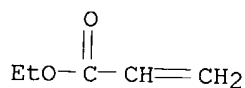
CMF C7 H12 O2



CM 3

CRN 140-88-5

CMF C5 H8 O2



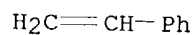
CM 4

CRN 107-13-1  
CMF C3 H3 N



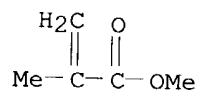
CM 5

CRN 100-42-5  
CMF C8 H8



CM 6

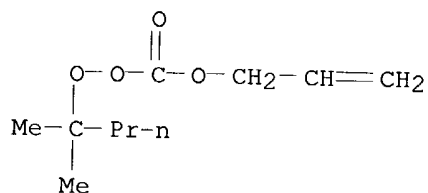
CRN 80-62-6  
CMF C5 H8 O2



RN 111907-75-6 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
2-propenoate, OO-(1,1-dimethylbutyl) O-2-propenyl carbonoperoxoate,  
ethenylbenzene, ethyl 2-propenoate and 2-propenenitrile (9CI) (CA INDEX  
NAME)

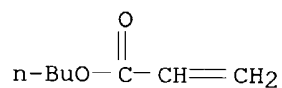
CM 1

CRN 82007-43-0  
CMF C10 H18 O4



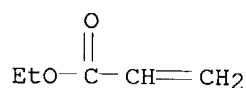
CM 2

CRN 141-32-2  
CMF C7 H12 O2



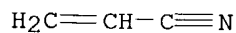
CM 3

CRN 140-88-5  
CMF C5 H8 O2



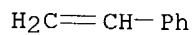
CM 4

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CMF C3 H3 N



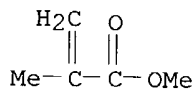
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CRN 100-42-5  
CMF C8 H8



CM 6

CRN 80-62-6  
CMF C5 H8 O2

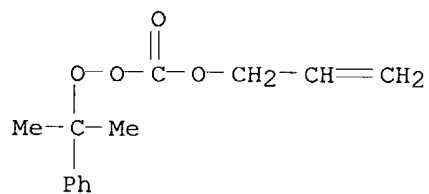


RN 111907-76-7 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
2-propenoate, ethenylbenzene, ethyl 2-propenoate, OO-(1-methyl-1-  
phenylethyl) O-2-propenyl carbonoperoxoate and 2-propenenitrile (9CI) (CA  
INDEX NAME)

CM 1

CRN 107547-49-9

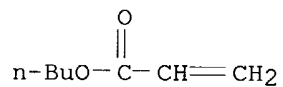
CMF C13 H16 O4



CM 2

CRN 141-32-2

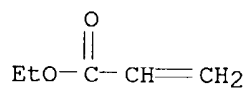
CMF C7 H12 O2



CM 3

CRN 140-88-5

CMF C5 H8 O2



CM 4

CRN 107-13-1

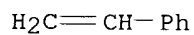
CMF C3 H3 N



CM 5

CRN 100-42-5

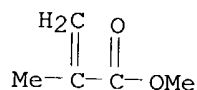
CMF C8 H8





CM 6

CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 16 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1985:96629 HCAPLUS  
DN 102:96629  
ED Entered STN: 22 Mar 1985  
TI Sound-insulating sheets based on mineral fibers and thermoplastic binders  
IN Dotzauer, Bernhard; Kast, Hans; Franzmann, Gernot; Ley, Gregor; Beckerle, Wilhelm Friedrich; Schilder, Wolfgang  
PA BASF A.-G., Fed. Rep. Ger.  
SO Ger. Offen., 14 pp.  
CODEN: GWXXBX  
DT Patent  
LA German  
IC C04B043-02; C08L033-06; C08L033-18; C08L025-08  
CC 38-3 (Plastics Fabrication and Uses)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3314373	A1	19841025	DE 1983-3314373	19830420
	US 4587278	A	19860506	US 1984-599575	19840412
	EP 123234	A2	19841031	EP 1984-104206	19840413
	EP 123234	A3	19860716		
	EP 123234	B1	19880727		
	R: BE, CH, DE, FR, GB, IT, LI, NL, SE				
	DK 8401998	A	19841021	DK 1984-1998	19840418
	DK 161463	B	19910708		
	DK 161463	C	19911216		
	JP 60010000	A2	19850119	JP 1984-77646	19840419
PRAI	DE 1983-3314373		19830420		

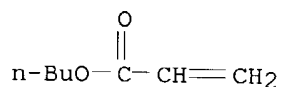
AB The sheets, optionally containing fillers, fireproofing agents, and waterproofing agents, wherein the binder is 4-20% (based on fiber weight) of a copolymer (glass temperature 30-80°) of ≥60% C1-4-alkyl methacrylates and ≤40% acrylonitrile and (or) styrene. Thus, to a suspension of 330 parts rock wool (average fiber length 3 cm) in 5000 parts H2O were added (based on fibers) clay 15, distearyldiketene 2, 50% anionic dispersion of acrylonitrile-Bu acrylate-Me methacrylate copolymer [27340-76-7] (glass temperature 62°) 8.5, and Al2(SO4)3 precipitant 0.4%. After dewatering by partial vacuum on a sieve, assisted by light pressure (.apprx.0.1 bar), the resulting 15-mm thick sheet was dried 2-3 h to give a sound insulator sheet with bending strength (4 cm width) 63 N (DIN 53 423).

ST acrylic mineral wool sound insulator

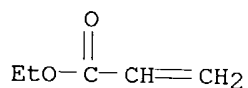
IT Binding materials  
(acrylic polymers, for mineral wool-based sound insulators)

IT Sound insulators

(mineral wool containing acrylic polymers)  
 IT Mineral wool  
 (sound insulators, containing acrylic polymers)  
 IT Acrylic polymers, uses and miscellaneous  
 RL: USES (Uses)  
 (sound insulators, containing mineral wool)  
 IT 25852-38-4 27340-76-7 28206-15-7 29763-01-7 **95053-13-7**  
 95053-14-8  
 RL: USES (Uses)  
 (sound insulators, containing mineral wool)  
 IT **95053-13-7**  
 RL: USES (Uses)  
 (sound insulators, containing mineral wool)  
 RN 95053-13-7 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
 2-propenoate, ethenylbenzene, ethyl 2-propenoate and 2-propenenitrile  
 (9CI) (CA INDEX NAME)  
  
 CM 1  
  
 CRN 141-32-2  
 CMF C7 H12 O2



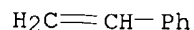
CM 2  
  
 CRN 140-88-5  
 CMF C5 H8 O2



CM 3  
  
 CRN 107-13-1  
 CMF C3 H3 N



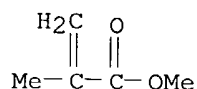
CM 4  
  
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 CMF C8 H8



CM 5

CRN 80-62-6

CMF C5 H8 O2



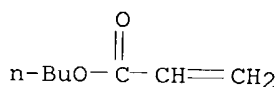
L33 ANSWER 17 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1984:572447 HCAPLUS  
 DN 101:172447  
 ED Entered STN: 10 Nov 1984  
 TI Delustered thermoplastic resin composition  
 IN Kishida, Kazuo; Hasegawa, Akira; Sugimori, Masahiro  
 PA Mitsubishi Rayon Co., Ltd. , Japan  
 SO U.S., 7 pp. Cont.-in-part of U.S. Ser. No. 204,169, abandoned.  
 CODEN: USXXAM

DT Patent  
 LA English  
 IC C08L025-14; C08L051-06; C08L027-06; C08L033-04  
 NCL 525064000  
 CC 37-6 (Plastics Manufacture and Processing)  
 FAN.CNT 2

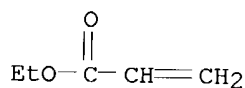
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4460742	A	19840717	US 1981-324269	19811123
	JP 56088460	A2	19810717	JP 1979-152564	19791126
PRAI	JP 1979-152564		19791126		
	US 1980-204169		19801105		

AB A thermoplastic resin composition having low luster consists of 100 parts thermoplastic resin and 0.1-40 parts resin comprising 20-80 parts polymer component A containing 30-100% C1-4 alkyl methacrylate, 0-70% C1-13 alkyl acrylate, and 0-50% monoethylenically unsatd. monomer and 20-80 parts polymer component B containing 30-90% vinyl aromatic compound, 10-60% C1-13 alkyl acrylate, 0.20% monoethylenically unsatd. monomer, and 0.05-10 parts crosslinking monomer/100 parts total monomers for polymer B. The modifying resin may be prepared by polymerizing the monomers for polymer B in the presence of polymer A or by blending the 2 polymers. Thus, poly(Me methacrylate) [9011-14-7] and 40:60:2 Et acrylate-styrene-triallylcyanurate copolymer [79497-40-8] were blended at 50:50 ratio, and 7 parts blend was mixed with 100 parts composition containing PVC [9002-86-2] 100, stabilizer 3, impact resistance aid 10, processing aid 1, and lubricant 1 part; kneaded by a roll at 165° to give a sheet; and compression molded at 165° and 40 kg/cm2 to give samples having 60° specular gloss 23% and Charpy impact strength 15.9 kg-cm/cm2.

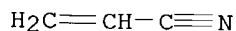
ST delustering PVC; acrylate copolymer delustering PVC; styrene copolymer  
delustering PVC  
IT Luster  
(lowering of, of PVC, by acrylic polymer)  
IT 50658-01-0 65994-33-4 79497-40-8 80293-67-0  
RL: USES (Uses)  
(acrylic polymer blends, delustering agents, for PVC)  
IT 9011-14-7 25767-47-9 25852-37-3 31215-83-5  
RL: PRP (Properties)  
(acrylic polymer blends, delustering agents, for PVC)  
IT 9002-86-2  
RL: USES (Uses)  
(delustering agents for, acrylic polymers as)  
IT 33479-64-0 33479-65-1 **51512-67-5** 60453-11-4 60453-13-6  
RL: USES (Uses)  
(graft, delustering agents, for PVC)  
IT **51512-67-5**  
RL: USES (Uses)  
(graft, delustering agents, for PVC)  
RN 51512-67-5 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
2-propenoate, ethenylbenzene, ethyl 2-propenoate, 2-propenenitrile and  
2-propenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)  
  
CM 1  
  
CRN 141-32-2  
CMF C7 H12 O2



CM 2  
  
CRN 140-88-5  
CMF C5 H8 O2

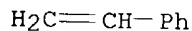


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CRN 107-13-1  
CMF C3 H3 N



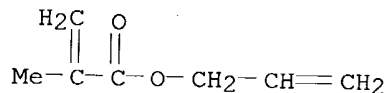
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CRN 100-42-5  
CMF C8 H8



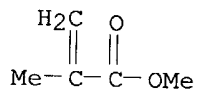
CM 5

CRN 96-05-9  
CMF C7 H10 O2



CM 6

CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 18 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1981:5041 HCAPLUS  
DN 94:5041  
ED Entered STN: 12 May 1984  
TI Waterproofing coating compositions  
PA Toa Gosei Chemical Industry Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC C09K003-18; C04B041-28; E04B001-64  
CC 42-10 (Coatings, Inks, and Related Products)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 55102673	A2	19800806	JP 1979-8796	19790130
	JP 63020872	B4	19880430		
PRAI	JP 1979-8796		19790130		

AB Waterproofing coating compns. with good penetrating power contain an alkoxy silane and an acrylic polymer in 1:0.1-10 ratio. For example, a composition (viscosity 14 s) from isobutyltrimethoxysilane [18395-30-7] 0.8, tetraethoxysilane [78-10-4] 0.2, 0.02:0.02:0.01:0.1:0.05 acrylonitrile-Et

acrylate-Me acrylate-Me methacrylate-styrene copolymer [ **69596-36-7**] 0.2, and iso-PrOH 4.0 parts gave a waterproofing coating (on concrete) with excellent durability.

ST silane acrylic coating concrete; waterproofing coating concrete

IT Concrete  
(waterproofing coatings for, alkoxysilane-acrylic polymer as penetrating)

IT Waterproof materials and Water-repellent materials  
(coatings, alkoxysilane-acrylic polymer, penetrating, for concrete)

IT 78-10-4 18395-30-7  
RL: USES (Uses)  
(waterproofing coatings containing acrylic polymers and, penetrating, for concrete)

IT **69596-36-7**  
RL: USES (Uses)  
(waterproofing coatings containing alkoxysilanes and, penetrating, for concrete)

IT **69596-36-7**  
RL: USES (Uses)  
(waterproofing coatings containing alkoxysilanes and, penetrating, for concrete)

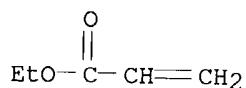
RN 69596-36-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with ethenylbenzene, ethyl 2-propenoate, methyl 2-propenoate and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 140-88-5

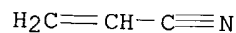
CMF C5 H8 O2



CM 2

CRN 107-13-1

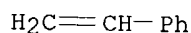
CMF C3 H3 N



CM 3

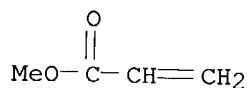
CRN 100-42-5

CMF C8 H8



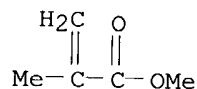
CM 4

CRN 96-33-3  
CMF C4 H6 O2



CM 5

CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 19 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1979:123290 HCAPLUS  
DN 90:123290  
ED Entered STN: 12 May 1984  
TI Leveling agent for floor polishes  
IN Feigin, Robert  
PA Sybron Corp., USA  
SO U.S., 4 pp.  
CODEN: USXXAM  
DT Patent  
LA English  
IC C09G001-16  
NCL 260029600MQ  
CC 42-11 (Coatings, Inks, and Related Products)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4131585	A	19781226	US 1978-898859	19780421
PRAI	US 1976-741544		19761115		

AB Leveling agents RZ(CHR1CH2O)m(CHR2CH2O)nH (R = C8-15 branched alkyl or alkylphenyl; Z = O, S; R1, R2 = H, Me; n + m ≤ 7) for floor polishes give compns. with high gloss, hardness, and resistance to streaking. Thus, water 54.6, 1% surfactant solution 0.8, 37% HCHO solution 0.2, diethylene glycol monoethyl ether 2.5, 30% emulsion of acrylonitrile-Et acrylate-Me acrylate-styrene copolymer [69596-36-7] 31.7, 40% emulsion of polyethylene [9002-88-4] 3.7, ammoniated rosin-maleic anhydride resin 10.0, and polyethylene glycol isodecyl ether [61827-42-7] 0.7 part were mixed and applied to vinyl asbestos floor tile to give a film with high gloss, water and heel mark resistance, and detergent resistance.

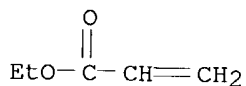
ST polyoxyalkylene ether floor polish; leveling agent floor polish

IT Polishing materials  
 (acrylic polymers, leveling agents for, polyoxyalkylene ethers as)  
 IT Resin acids and Rosin acids  
 RL: USES (Uses)  
 (maleated, floor polishes containing)  
 IT Leveling agents  
 Plasticizers  
 (polyoxyalkylene ethers, for floor polishes)  
 IT 25035-69-2 35705-21-6 **69596-36-7**  
 RL: USES (Uses)  
 (floor polishes based on, leveling agents for)  
 IT 9002-88-4 9010-77-9 9011-13-6 55939-33-8  
 RL: USES (Uses)  
 (floor polishes containing)  
 IT 61827-42-7 69620-43-5 69671-04-1  
 RL: USES (Uses)  
 (leveling agents, for floor polishes)  
 IT **69596-36-7**  
 RL: USES (Uses)  
 (floor polishes based on, leveling agents for)  
 RN 69596-36-7 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with ethenylbenzene,  
 ethyl 2-propenoate, methyl 2-propenoate and 2-propenenitrile (9CI) (CA  
 INDEX NAME)

CM 1

CRN 140-88-5

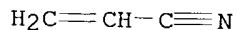
CMF C5 H8 O2



CM 2

CRN 107-13-1

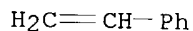
CMF C3 H3 N



CM 3

CRN 100-42-5

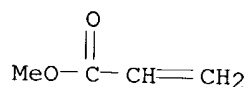
CMF C8 H8





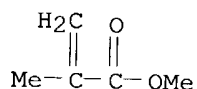
CM 4

CRN 96-33-3  
CMF C4 H6 O2



CM 5

CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 20 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1979:88332 HCAPLUS  
DN 90:88332  
ED Entered STN: 12 May 1984  
TI Thermoplastic molding compositions having good impact and weathering resistance  
IN Kamata, Kazumasa; Kinoshita, Yasuo; Hongo, Masafumi; Nakanishi, Hiroshi  
PA Mitsubishi Rayon Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC C08L069-00  
CC 36-6 (Plastics Manufacture and Processing)  
FAN.CNT 1

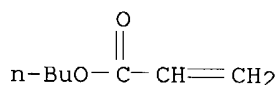
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 53129246	A2	19781111	JP 1977-44373	19770418
	JP 62037671	B4	19870813		
PRAI	JP 1977-44373		19770418		
AB	<p>Compns. of saturated polyesters 5-94, polycarbonates 5-94, and vinyl compound-grafted acrylic rubber 1-40% have good moldability and good mech. and thermal properties. Thus, a mixture of Bu acrylate 90, styrene 9, triallyl isocyanurate 1, and dioctyl sulfosuccinate 1.5 parts was added dropwise over 1 h to 400 parts H2O containing 0.5 parts K2S2O8 at 70° and stirred 1 h. A mixture of Me methacrylate 30, styrene 20, and Cl2H25SH 0.1 part was added to the above emulsion for 1 h and stirred 1 h addnl. to give a graft copolymer (I) [66453-75-6]. A blend of poly(ethylene terephthalate) [25038-59-9] 22.5, bisphenol A polycarbonate [24936-68-3] 67.5, and I 10.0 parts was extruded at 250-80°, pelletized, and injection molded at 280° to give test pieces having melt index (265°, 5 kg) 24.0 g/10 min, heat-distortion temperature 115.1°, and impact strength (ASTM D 256) 18.8 and 18.0 kg-cm/cm2 before and after</p>				

400 h in a weatherometer, resp.  
 ST polyester polycarbonate blend; graft copolymer blend; acrylic rubber  
 grafted blend; impact resistance plastic blend  
 IT Plastics, molded  
 RL: USES (Uses)  
 (grafted acrylic rubber-polycarbonate-polyester blends,  
 impact-resistant)  
 IT Rubber, synthetic  
 RL: USES (Uses)  
 (acrylic, vinyl compound-grafted, in impact-resistant polymer blends)  
 IT 24968-12-5 25038-59-9, uses and miscellaneous 26062-94-2  
 RL: USES (Uses)  
 (blends with polycarbonates and grafted acrylic rubber,  
 impact-resistant)  
 IT 24936-68-3, uses and miscellaneous  
 RL: USES (Uses)  
 (blends with polyester and grafted acrylic rubber, impact-resistant)  
 IT 25037-45-0  
 RL: PRP (Properties)  
 (blends with polyester and grafted acrylic rubber, impact-resistant)  
 IT **51512-67-5** 66453-75-6 69289-12-9  
 RL: USES (Uses)  
 (graft, blends with polycarbonates and polyesters, impact-resistant)  
 IT **51512-67-5**  
 RL: USES (Uses)  
 (graft, blends with polycarbonates and polyesters, impact-resistant)  
 RN 51512-67-5 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
 2-propenoate, ethenylbenzene, ethyl 2-propenoate, 2-propenenitrile and  
 2-propenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

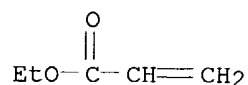
CMF C7 H12 O2



CM 2

CRN 140-88-5

CMF C5 H8 O2



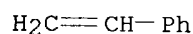
CM 3

CRN 107-13-1  
CMF C3 H3 N



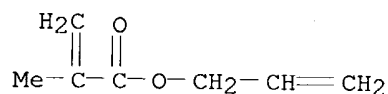
CM 4

CRN 100-42-5  
CMF C8 H8



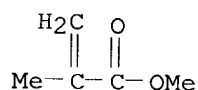
CM 5

CRN 96-05-9  
CMF C7 H10 O2



CM 6

CRN 80-62-6  
CMF C5 H8 O2

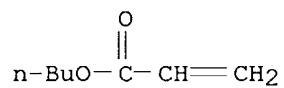


L33 ANSWER 21 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1978:106186 HCAPLUS  
DN 88:106186  
ED Entered STN: 12 May 1984  
TI Weather- and impact-resistant resin compositions  
IN Kato, Tetsuji; Izumi, Mikio; Kamata, Kazumasa; Chikanishi, Kunio; Handa, Yoshiharu  
PA Mitsubishi Rayon Co., Ltd., Japan  
SO Jpn. Tokkyo Koho, 5 pp. Division of Japan. Koho 74 06,194.  
CODEN: JAXXAD  
DT Patent  
LA Japanese  
IC C08L033-10  
CC 36-3 (Plastics Manufacture and Processing)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 52033656	B4	19770830	JP 1973-89977	19730813
PRAI	JP 1973-89977		19730813		
AB	<p>Crosslinked elastomers of <math>\geq 60\%</math> C1-10 alkyl acrylate and <math>\leq 40\%</math> monomer(s) chosen from (meth)acrylonitrile (I), styrene (II), <math>\alpha</math>-methylstyrene (III), and C1-10 alkyl methacrylate were grafted in 100:5-900 ratio with monomer mixts. of Me methacrylate (IV) 10-50, I 5-40, and II (or III) <math>\leq 60\%</math>, and terpolymers of IV 10-50, I 5-40, and II (or III) <math>\leq 60\%</math> were blended with 5-40% (based on the crosslinked elastomers) grafted elastomers for improved weather resistance. For example, 200 parts water containing 0.15 part NaHSO<sub>3</sub> at 35° was mixed with 0.3 part K<sub>2</sub>S<sub>2</sub>O<sub>8</sub>, treated with Bu acrylate 90, IV 10, Bz<sub>2</sub>O<sub>2</sub> 1, and Pelex OTP 2.4 parts over 2.5 h, polymerized for 30 min (conversion <math>&gt;95\%</math>; 98% Bz<sub>2</sub>O<sub>2</sub> intact), and crosslinked at 98° for 3 h (gel content 95.1%), and the resulting latex (305 parts) at 70° was treated with a mixture of IV 12, acrylonitrile 6, and II 12 parts and a solution of 0.15 part K<sub>2</sub>S<sub>2</sub>O<sub>8</sub> in 5 parts water for 1.5 h to give a graft copolymer [25852-38-4]. An injection molding of 20:40:40 acrylonitrile-Me methacrylate-styrene copolymer [25213-88-1] containing 25% (based on the elastomer) of the graft copolymer had Dynstat impact strength 88-106 kg-cm/cm<sup>2</sup>, weather resistance 800 h, and heat distortion temperature 88°, compared with 75-90, 50, and 86, resp., for a high impact-type ABS.</p>				
ST	weather resistant acrylic polymer; impact resistant acrylic polymer; acrylic rubber grafted				
IT	Plastics				
	(acrylic blends, impact- and weather-resistant)				
IT	Rubber, synthetic				
	(acrylic, grafted, blends with acrylic polymers, weather- and impact-resistant)				
IT	32505-73-0				
	RL: USES (Uses)				
	(blends with grafted acrylic rubbers, weather- and impact resistant)				
IT	25213-88-1 25747-75-5				
	RL: USES (Uses)				
	(blends with grafted acrylic rubbers, weather- and impact-resistant)				
IT	25852-38-4 32505-75-2				
	RL: USES (Uses)				
	(graft, blends with acrylonitrile-Me methacrylate-styrene copolymer, weather- and impact resistant)				
IT	<b>65842-98-0</b>				
	RL: USES (Uses)				
	(graft, blends with acrylonitrile-Me methacrylate- $\alpha$ -methylstyrene copolymer, weather- and impact-resistant)				
IT	65842-99-1				
	RL: USES (Uses)				
	(graft, blends with methacrylonitrile-Me methacrylate-styrene copolymer, weather- and impact-resistant)				
IT	<b>65842-98-0</b>				
	RL: USES (Uses)				
	(graft, blends with acrylonitrile-Me methacrylate- $\alpha$ -methylstyrene copolymer, weather- and impact-resistant)				
RN	65842-98-0 HCAPLUS				
CN	2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate, (1-methylethenyl)benzene and 2-propenenitrile (9CI) (CA INDEX NAME)				

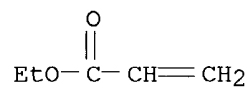
CM 1

CRN 141-32-2  
CMF C7 H12 O2



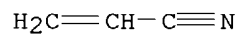
CM 2

CRN 140-88-5  
CMF C5 H8 O2



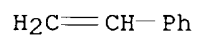
CM 3

CRN 107-13-1  
CMF C3 H3 N



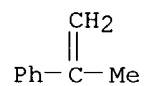
CM 4

CRN 100-42-5  
CMF C8 H8



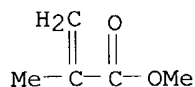
CM 5

CRN 98-83-9  
CMF C9 H10



CM 6

CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 22 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1978:23851 HCAPLUS  
DN 88:23851  
ED Entered STN: 12 May 1984  
TI Vinyl chloride resin compositions  
IN Kosugi, Takumi; Yasunaga, Shigeki; Tanaka, Yutaka; Hashimoto, Yoshihiko  
PA Kanegafuchi Chemical Industry Co., Ltd., Japan  
SO U.S., 8 pp.  
CODEN: USXXAM  
DT Patent  
LA English  
IC C08L027-06  
NCL 260029600RB  
CC 36-6 (Plastics Manufacture and Processing)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4014842	A	19770329	US 1975-606766	19750822
PRAI	US 1973-363478		19730524		

AB Weather-resistant impact improving agents for PVC [9002-86-2] are manufactured by grafting acrylonitrile (I), Me methacrylate (II), and styrene onto copolymers of allyl (meth)acrylate and Et acrylate and(or) Bu acrylate (III). Thus, styrene 24, II 12, I 4, and cumene hydroperoxide 0.2 parts were added in 4 h at 60° with stirring to an aqueous dispersion containing allyl methacrylate (IV)-III copolymer, Na formaldehyde sulfoxylate, EDTA di-Na salt, FeSO<sub>4</sub>.7H<sub>2</sub>O, and heated an addnl. h at 60° to complete polymerization, giving graft copolymer (V) [32457-46-8] at 95% conversion. A mixture containing PVC (average d.p. 700) 100, V 12, Bu<sub>2</sub>Sn mercaptide 2, epoxidized

soybean oil 1, and oily wax 0.5 parts was molded to give a sample with Izod impact strength 20.8 kg cm/cm<sup>2</sup>, tensile strength 482 kg/cm<sup>2</sup>, and elongation 185% compared with 7.8 kg cm/cm<sup>2</sup>, 399 kg/cm<sup>2</sup>, and 184%, resp., for a similar sample containing ethylene glycol dimethacrylate instead of IV in the copolymer to be grafted onto.

ST allyl methacrylate copolymer impact improver; PVC impact resistance; weather resistance PVC; acrylate copolymer impact improver; acrylonitrile copolymer impact improver; methacrylate graft copolymer impact improver

IT Polymerization  
(graft, of acrylonitrile, Me methacrylate and styrene on Bu acrylate-allyl (meth)acrylate copolymers)

IT 32457-46-8 51464-67-6 **51512-67-5**

RL: USES (Uses)

(graft, weather-resistant impact improving agents, for PVC)

IT 9002-86-2

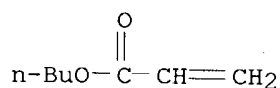
RL: USES (Uses)

(weather-resistant impact improving agents for, acrylic graft

copolymers as)  
 IT **51512-67-5**  
 RL: USES (Uses)  
 (graft, weather-resistant impact improving agents, for PVC)  
 RN 51512-67-5 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
 2-propenoate, ethenylbenzene, ethyl 2-propenoate, 2-propenenitrile and  
 2-propenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

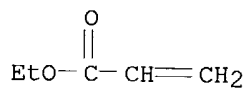
CM 1

CRN 141-32-2  
 CMF C7 H12 O2



CM 2

CRN 140-88-5  
 CMF C5 H8 O2



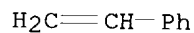
CM 3

CRN 107-13-1  
 CMF C3 H3 N



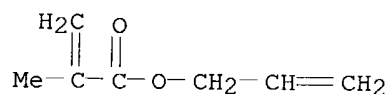
CM 4

CRN 100-42-5  
 CMF C8 H8



CM 5

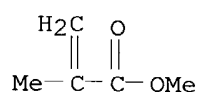
CRN 96-05-9  
 CMF C7 H10 O2



CM 6

CRN 80-62-6

CMF C5 H8 O2



L33 ANSWER 23 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1974:414271 HCAPLUS  
 DN 81:14271  
 ED Entered STN: 12 May 1984  
 TI Vinyl chloride resin  
 IN Kosugi, Takumi; Yasunaga, Shigeki; Tanaka, Yutaka; Hashimoto, Yoshihiko  
 PA Kanegafuchi Chemical Industry Co., Ltd.  
 SO Ger. Offen., 26 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC C08F  
 CC 36-6 (Plastics Manufacture and Processing)  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2326934	A1	19731213	DE 1973-2326934	19730525
	JP 49010237	A2	19740129	JP 1972-52321	19720525
	JP 51028117	B4	19760817		
PRAI	JP 1972-52321		19720525		

AB Impact modifiers with improved weather resistance for PVC [9002-86-2] were prepared by grafting 20-100:0-80:0-20 Me methacrylate (I)-styrene-Bu acrylate (II) mixts., 40-80:10-50:0-20 styrene-acrylonitrile(III)-II mixts., or 20-70:10-60:20-50:0-20 I-styrene-III-II mixts. onto a base copolymer containing 20-80% alkyl acrylate or a combination of .geq.80% Bu acrylate and .leq.20% allyl (meth)acrylate. Thus, an aqueous mixture containing II 100, allyl methacrylate (IV) 1, Na dodecylbenzenesulfonate 0.8, and K2S2O8 6.5 parts was stirred 6 hr at 59-60.deg. to a copolymer of swelling degree 15.4%, gel content 89.3%, and d.p. 98%. A solution containing styrene 24, I 12, III 4, and cumene hydroperoxide 0.2 parts was added in 4 hr at 60.deg. to an aqueous mixture containing the above prepared copolymer 60, water 200, Na formaldehydesulfoxylate 0.4, EDTA.2Na 0.01, and FeSO4.7H2O 6.0005 parts and the mixture stirred an addnl. 1 hr to give acrylonitrile-allyl methacrylate-butyl acrylate-methyl methacrylate-styrene graft copolymer (V) [32457-46-8] of grafting degree 95%. A composition containing PVC(d.p. 700)



100, V 12, dibutyltin sulfide 2, epoxidized soybean oil 1, and oily wax 0.5 had Izod impact strength 20.8 kg cm/cm2 and tensile strength 482 kg/cm2 compared to 7.8 kg cm/cm2 and 399 kg/cm2 for a similar composition containing a graft copolymer prepared from ethylene glycol dimethacrylate instead of IV.

ST impact modifier acrylic; PVC impact strength; weather resistance impact modifier; allyl methacrylate graft copolymer; styrene graft copolymer; blend PVC

IT Polymerization

(graft, of styrene and acrylic monomers on allyl (meth)acrylate polymers)

IT 32457-46-8P 50658-01-0P 51252-07-4P 51252-08-5P 51464-67-6P

**51512-67-5P**

RL: PREP (Preparation)

(graft, manufacture of, as impact modifier for PVC)

IT 9002-86-2

RL: USES (Uses)

(impact-resistant weatherable, containing crosslinked acrylic graft polymers)

IT **51512-67-5P**

RL: PREP (Preparation)

(graft, manufacture of, as impact modifier for PVC)

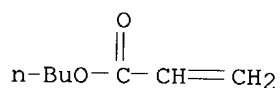
RN 51512-67-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate, 2-propenenitrile and 2-propenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

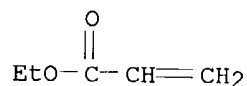
CMF C7 H12 O2



CM 2

CRN 140-88-5

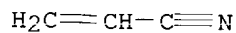
CMF C5 H8 O2



CM 3

CRN 107-13-1

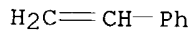
CMF C3 H3 N



CM 4

CRN 100-42-5

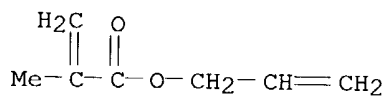
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CM 5

CRN 96-05-9

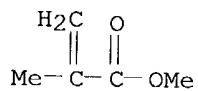
CMF C7 H10 O2



CM 6

CRN 80-62-6

CMF C5 H8 O2



L33 ANSWER 24 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1973:112202 HCAPLUS  
DN 78:112202  
ED Entered STN: 12 May 1984  
TI Molding materials based on rubber-modified nitrile copolymers for making  
food-packaging materials  
IN Endo, Ryuichi  
SO Ger. Offen., 30 pp.  
CODEN: GWXXBX  
DT Patent  
LA German  
IC C08F  
CC 36-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 17  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2219708		19721109		
	FR 2139838			FR	

GB 1370056 GB  
 JP 47039241 19720000 JP  
 JP 50037700 19750000 JP  
 US 3775518 19730000 US  
 PRAI JP 1971-26109 19710423

AB The title materials which gave thermally stable, transparent, and impact resistant products, contained 100 parts copolymer A prepared by polymerizing 40-90 parts monomer mixture (a) of 55-90% .geq.1 CH<sub>2</sub>:CR<sub>1</sub>CN (R<sub>1</sub> = H, Me, Et) and 10-45% .geq.1 CH<sub>2</sub>:CR<sub>2</sub>CO<sub>2</sub>R<sub>3</sub> (R<sub>2</sub> = H, Me, Et and R<sub>3</sub> = C<sub>1</sub>-4 alkyl) and 5-60 parts rubbery polymer (b) of 30-80% .geq.1 CH<sub>2</sub>:CR<sub>4</sub>CO<sub>2</sub>R<sub>5</sub> (R<sub>4</sub> = H, Me, Et and R<sub>5</sub> = C<sub>2</sub>-10 alkyl), 4-50% .geq.1 conjugated diolefin, and 5-30% .geq.1 CH<sub>2</sub>:CR<sub>6</sub>C<sub>6</sub>H<sub>4</sub>R<sub>7</sub> (R<sub>6</sub> = H, Me and R<sub>7</sub> = H, halogen, Me) and 0-100 copolymer B prepared by polymerizing (a) and 5-30% (b). Thus, butadiene-2-ethylhexyl acrylate-styrene copolymer (I) [25086-98-0] was prepared and 15 parts I was polymerized with a monomer mixture containing 70 parts acrylonitrile [107-13-1] and 30 parts Me acrylate [96-33-3]. The copolymer product was granulated and formed into a 3-mm-thick plate and had transparency 91.0%, yellowing index (ASTM D-1925-63T) before heating 6.8 and after heating 13.2, Izod impact strength 12.8 kg-cm/cm<sup>2</sup>, and heat distortion temperature 62.5.deg..

ST food packaging material; acrylate copolymer molding; butadiene copolymer molding; styrene copolymer molding; acrylonitrile copolymer molding

IT Packaging materials  
 (acrylate rubber transparent sheets, for food)

IT Rubber, synthetic  
 (acrylate, for food packaging)

IT Food  
 (packaging materials for, acrylate rubber transparent sheets as)

IT 41585-11-9 41585-12-0 **41585-13-1** 41585-14-2 41585-15-3  
 41586-86-1  
 RL: USES (Uses)  
 (block, rubber, for food packaging)

IT 25086-98-0  
 RL: USES (Uses)  
 (rubber)

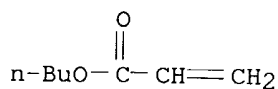
IT **41585-13-1**  
 RL: USES (Uses)  
 (block, rubber, for food packaging)

RN 41585-13-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
 2-propenoate, ethenylbenzene, 2-methyl-1,3-butadiene, methyl 2-propenoate and 2-propenenitrile (9CI) (CA INDEX NAME)

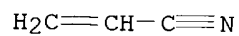
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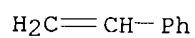
CM 2

CRN 107-13-1  
CMF C3 H3 N



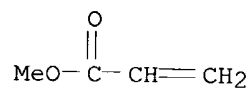
CM 3

CRN 100-42-5  
CMF C8 H8



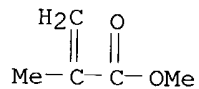
CM 4

CRN 96-33-3  
CMF C4 H6 O2



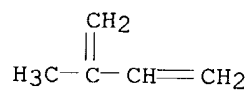
CM 5

CRN 80-62-6  
CMF C5 H8 O2



CM 6

CRN 78-79-5  
CMF C5 H8



DN 76:86394  
 ED Entered STN: 12 May 1984  
 TI Graft copolymers and their blends having excellent impact and weather resistance  
 IN Kato, Tetsuji; Izumi, Mikio; Kamada, Kazumasa; Chikanishi, Kunio; Handa, Ryoji  
 PA Mitsubishi Rayon Co., Ltd.  
 SO Brit., 20 pp.  
 CODEN: BRXXAA  
 DT Patent  
 LA English  
 IC C08F  
 CC 35 (Synthetic High Polymers)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1254226		19711117	GB	19690721
AB	Graft copolymers were prepared by emulsion polymerization of 5-1900 parts vinyl monomers and optional copolymerizable polyenes in the presence of an aqueous dispersion latex containing 100 parts crosslinked acrylate elastomer (gel content .geq.80%, degree of swelling 3-15) preferably prepared in the presence of an organic peroxide. Blends were prepared from 5-95 parts graft copolymer and 95-5 parts thermoplastic resin. Thus, a crosslinked acrylate elastomer, i.e. a 90:10 butyl acrylate-methyl methacrylate copolymer [25852-37-3] reaction mixture under N containing aqueous NaHSO3, K2S2O8, Bz2O2, and Pelex OTP sulfosuccinate emulsifier was added to a mixture of acrylonitrile, styrene, and ethylene glycol dimethacrylate, then mixed with aqueous K2S2O8 and polymerized to give a graft copolymer latex which was diluted with H2O and mixed with acrylonitrile, styrene, lauryl mercaptan, and K2S2O8 to give a graft copolymer latex with good gloss.				
ST	styrene graft copolymn; acrylonitrile graft copolymn; acrylate graft copolymn; methacrylate graft copolymn; blend graft copolymer; weather resistance copolymer; impact resistance copolymer; glossy graft copolymer				
IT	Polymerization (graft, of vinyl compds. on acrylic rubber)				
IT	Plastics, molded RL: USES (Uses) (impact and weather resistant, from crosslinked acrylate elastomer-thermoplastic resin blends)				
IT	9002-86-2	9003-54-7	9010-96-2	9011-87-4	25213-88-1 25747-75-5
	26299-47-8	32505-73-0			
	RL: USES (Uses) (blends with crosslinked acrylate elastomers, impact and weather resistant moldings from)				
IT	25852-38-4	33011-39-1			
	RL: USES (Uses) (graft, blends with thermoplastic resins, impact and weather resistant)				
IT	32457-41-3	32457-42-4	32457-43-5	32457-44-6	32505-64-9
	32505-65-0	<b>32505-74-1</b>	32505-75-2	32505-76-3	32505-77-4
	32505-83-2	33660-17-2	36424-75-6	36424-76-7	36424-77-8
	RL: USES (Uses) (graft, blends with thermoplastic resins, impact and weather resistant moldings from)				
IT	9079-47-4				
	RL: USES (Uses) (graft, blends with thermoplastic resins, impact- and				

weather-resistant)

IT **32505-74-1**

RL: USES (Uses)

(graft, blends with thermoplastic resins, impact and weather resistant moldings from)

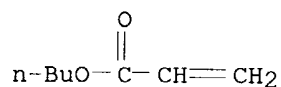
RN 32505-74-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with butyl 2-propenoate, ethenylbenzene, ethyl 2-propenoate, methyl 2-methyl-2-propenoate and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

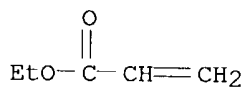
CMF C7 H12 O2



CM 2

CRN 140-88-5

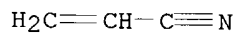
CMF C5 H8 O2



CM 3

CRN 107-13-1

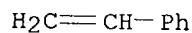
CMF C3 H3 N



CM 4

CRN 100-42-5

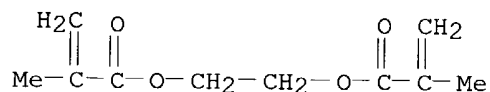
CMF C8 H8



CM 5

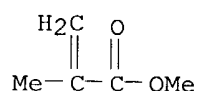
CRN 97-90-5

CMF C10 H14 O4



CM 6

CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 26 OF 26 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1971:142831 HCAPLUS  
DN 74:142831  
ED Entered STN: 12 May 1984  
TI Graft polymers with excellent resistance to shock and weathering  
IN Kato, Tetsuji; Izumi, Mikio; Chikanishi, Kunio; Handa, Ryoji; Kamada, Kazumasa  
PA Mitsubishi Rayon Co., Ltd.  
SO Ger. Offen., 45 pp.  
CODEN: GWXXBX  
DT Patent  
LA German  
IC C08F  
CC 36 (Plastics Manufacture and Processing)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 1937999	A	19710211	DE 1969-1937999	19690725
PRAI	DE 1969-1937999		19690725		

AB The title polymers were prepared by grafting vinyl monomer(s) onto a crosslinked acrylate elastomer. Thus, Bu acrylate, Me methacrylate, Bz2O2 and Pelex OTP was slowly added to aqueous NaHSO3 containing K2S2O8 and the mixture stirred 3 hr at 98°. The resulting crosslinked elastomer was treated with acrylonitrile (I), styrene (II), ethylene glycol dimethacrylate and K2S2O8 90 min at 70°. The graft copolymer latex was diluted with water and treated with addnl. I and II with C12H25SH and K2S2O8. The product was worked up and injection molded into samples with exceptional impact strength and surface luster.

ST vinyl acrylic graft copolymers; impact strength graft copolymers; weather resistant graft copolymers; styrene grafted acrylate elastomers; molding grafted acrylate elastomer

IT Acrylonitrile, polymer with α-methylstyrene and styrene, preparation Styrene, polymer with acrylonitrile and α-methylstyrene, preparation Styrene, α-methyl-, polymer with acrylonitrile and styrene  
RL: PREP (Preparation)

(graft copolymers containing, shock-resistant)

IT Acrylonitrile, polymer with allyl methacrylate butyl acrylate, methyl methacrylate and styrene, preparation

Acrylonitrile, polymer with butyl acrylate, butyl methacrylate, ethylene methacrylate, methyl methacrylate, styrene and 2,4,6-tris(allyloxy)-s-triazine, preparation

Acrylonitrile, polymer with butyl acrylate, ethylene methacrylate, methacrylonitrile and styrene, preparation

Acrylonitrile, polymer with butyl acrylate, methyl methacrylate, styrene and tetraethylene glycol dimethacrylate, preparation

Methacrylic acid methyl ester, polymer with acrylonitrile, allyl methacrylate, butyl acrylate and styrene, preparation

Methacrylic acid methyl ester, polymer with acrylonitrile, butyl acrylate, butyl methacrylate, ethylene methacrylate, styrene and 2,4,6-tris(allyloxy)-s-triazine, preparation

Methacrylic acid methyl ester, polymer with acrylonitrile, butyl acrylate, styrene and tetraethylene glycol dimethacrylate, preparation

Styrene, polymer with acrylonitrile butyl acrylate, methyl methacrylate and tetraethylene glycol dimethacrylate, preparation

Styrene, polymer with acrylonitrile, allyl methacrylate, butyl acrylate and methyl methacrylate, preparation

Styrene, polymer with acrylonitrile, butyl acrylate, butyl methacrylate, ethylene methacrylate, methyl methacrylate and 2,4,6-tris(allyloxy)-s-triazine, preparation

Styrene, polymer with acrylonitrile, butyl acrylate, ethylene methacrylate and methacrylonitrile, preparation

Acrylic acid butyl ester, polymer with acrylonitrile, allyl methacrylate, methyl methacrylate and styrene

Acrylic acid butyl ester, polymer with acrylonitrile, butyl methacrylate, ethylene methacrylate, methyl methacrylate, styrene and 2,4,6-tris(allyloxy)-s-triazine

Acrylic acid butyl ester, polymer with acrylonitrile, ethylene methacrylate, methacrylonitrile and styrene

Acrylic acid butyl ester, polymer with acrylonitrile, methyl methacrylate, styrene and tetraethylene glycol dimethacrylate

Methacrylic acid, allyl ester, polymer with acrylonitrile, butyl acrylate, methyl methacrylate and styrene

Methacrylic acid, butyl ester, polymer with acrylonitrile, butyl acrylate, ethylene methacrylate, methyl methacrylate, styrene and 2,4,6-tris(allyloxy)-s-triazine

Methacrylic acid, diester with tetraethylene glycol, polymer with acrylonitrile, butyl acrylate, methyl methacrylate and styrene

Methacrylic acid, ethylene ester, polymer with acrylonitrile butyl acrylate, methacrylonitrile and styrene

Methacrylic acid, ethylene ester, polymer with acrylonitrile, butyl acrylate, butyl methacrylate, methyl methacrylate, styrene and 2,4,6-tris(allyloxy)-s-triazine

Methacrylonitrile, polymer with acrylonitrile, butyl acrylate, ethylene methacrylate and styrene

Tetraethylene glycol, dimethacrylate, polymer with acrylonitrile, butyl acrylate, methyl methacrylate and styrene

s-Triazine, 2,4,6-tris(allyloxy)-, polymer with acrylonitrile, butyl acrylate, butyl methacrylate, ethylene methacrylate, methyl methacrylate and styrene

RL: PREP (Preparation)

(graft, shock-resistant)

IT 9002-86-2P, preparation 9003-54-7P, preparation 9011-87-4P,



preparation 25213-88-1P, preparation 25747-75-5P, preparation  
26299-47-8P, preparation 32505-73-0, preparation

RL: PREP (Preparation)

(graft copolymers containing, shock-resistant)

IT 32457-40-2P, preparation 32457-42-4, preparation 32457-43-5,  
preparation 32457-44-6, preparation 32505-64-9, preparation  
32505-65-0, preparation **32505-74-1**, preparation 32505-75-2,  
preparation 32505-76-3, preparation 32505-77-4, preparation  
33011-39-1, preparation 33660-17-2, preparation

RL: PREP (Preparation)

(graft, shock-resistant)

IT 32457-41-3P, preparation

RL: PREP (Preparation)

(preparation of)

IT **32505-74-1**, preparation

RL: USES (Uses)

(graft, shock-resistant)

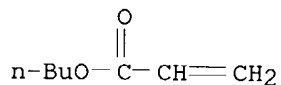
RN 32505-74-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with butyl  
2-propenoate, ethenylbenzene, ethyl 2-propenoate, methyl  
2-methyl-2-propenoate and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

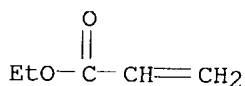
CMF C7 H12 O2



CM 2

CRN 140-88-5

CMF C5 H8 O2



CM 3

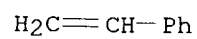
CRN 107-13-1

CMF C3 H3 N



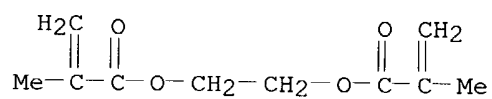
CM 4

CRN 100-42-5  
CMF C8 H8



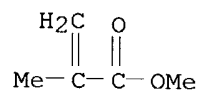
CM 5

CRN 97-90-5  
CMF C10 H14 O4



CM 6

CRN 80-62-6  
CMF C5 H8 O2



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